

FANTASTIC UNIVERSE

SCIENCE FICTION

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Virgil
Finlay

3 EXCITING NOVELETS by

°STANLEY MULLEN • HARRY HARRISON • THOMAS N. SCORTIA

°Startling UFO Articles by IVAN SANDERSON and MORRIS JESSUP

NEXT STAGE—THE MOON?

AN EDITORIAL

THIS MONTH'S COVER, showing a Flying Saucer, out of control, crashing into Radio City, is no more "impossible" than the headlines which have recently become a part of our days. Science has caught up with Science Fiction with the launching of the Earth Satellite.

The very valid concern about the long-range significance of Russia's *sputnik* (which is, incidentally, the Russian for *hobo*) has obscured facts concerning the launching which may interest you.

The launching rocket was in three stages, the first stage dropping away at roughly 4,000 miles per hour; the second stage, apparently powered by a different fuel and carrying the guiding controls, dropping as a speed of 12,000 miles an hour was reached; the third stage, charged with yet another type of propellant, boosting the speed to the final 18,000 miles per hour, the satellite itself being then released.

While we are told that the *sputnik* "only" broadcast information about its own movements and temperature, the size indicates what is immediately possible. Filled with instruments, it even at this point sent back data about the ionosphere, about cosmic and other radiations, about the weather between it and the Earth, and information about space itself, obviously important for planning eventual rocket flights to the moon.

And such flights *are* planned.

The speed which put the satellite into its orbit where it was tied down, or rather constrained, by the forces of gravity, was 18,000 miles an hour. With another 7,000 miles an hour, it would have had the velocity to escape from gravitation entirely and coast to the moon.

There is already talk of a rocket that *will* take a "robot laboratory" to the moon. Once it lands, a hatch will open, and a radio-controlled robot vehicle, containing recording instruments, will leave the craft and set out to inspect the surface of the moon, gathering data useful in planning for the later establishment of a manned scientific station. It is expected that the Moon, and then Mars and Venus, will be reached in the next decade.

Our immediate concern, however, is with, as Field Marshal Viscount Montgomery pointed out only a few years ago, the fact that a large unmanned satellite, circling this earth, would contain television, photographic and communication equipment. Apart from simply reporting on the weather (in itself of military value) "the satellite could look down on any desired area several times in each twenty-four hours. The information thus gained would depend on the state of development of radar, visual optics and television technology. The pictures taken would be automatically developed and sent back to earth by radio."

Today, then, we have *sputnik*. Tomorrow—manned satellites?
The next stage—the moon? And then?

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NOTED ASTRONOMER CONFIRMS THIS BOOK.

More Alarming than Sputnik or H-Bomb.

Most likely time is short so prepare and

LIVE THROUGH OR DIE IN THE GREAT FLOOD

**Coming Soon, Which Will be Caused by a SHIFT OF THE
AXIS OF THE EARTH as a result of the GYROSCOPIC
ACTION of our Solar System.**

A similar shift, thousands of years ago, caused the ice ages, and the oceans to rush over the land at terrific speed, tearing mountains away and covering tropical forests (which are now our coal beds) with hundreds of feet of earth.

READ AND HEED the amazing book "The Coming Disaster" (90 pages) telling what the flood will be like, about when it will come, the warning to be had, and containing the astronomy, gyroscopic, mathematical and geological proofs, written plainly. These proofs are indisputable and all who have seen mechanical demonstrations leave convinced that the book is correct.

This is not a religious prediction, but is purely **SCIENTIFIC**. However, the Bible predicts it. Isaiah 33:13, "Therefore I shall shake the heavens and the earth **SHALL REMOVE OUT OF HER PLACE**, 24:20, "The earth shall reel to and fro like a drunkard." See also Amos 8: 9, 8:8; Haggai 2:6; Isaiah 10:26; 19:5; 28:17; 44:3; 24:20.

"I freely take an oath that God strike me dead this very moment if there is any substantial error in this book."—Adam D. Barber, author.

READ in this book (1) a letter from the Nobel (prize) Foundation referring it to their physics committee; (2) the report of an analytical laboratory confirming it; (3) many newspaper clippings, letter from the Civil Defense Corps of Ohio, letters from astronomers and others pertaining to it; (4) about 25 "run of the mill" fan letters from readers of it; (5) our efforts to date to save civilization through this flood and our latest plans for it, including pressure on Congress to build balloons and boats; (6) our plan to prevent the flood by diverting the axis of the earth with atomic jets.

Eclipses are foretold with accuracy many years in advance. The prediction of the shift is along similar lines, only more complicated. On Dec. 21, 1950 the sun rose in the wrong place, indicating a forerunner slight shift.

Reports are that the South Pole is now 600 miles off its nest and that the polar expedition scientists are disagreeing as to the cause. Its chief, Dr. Paul Siple, has this book and I conferred with him several times about the matter, before he left.

Dr. Frankwich-Gospatt, the noted English Scientist, writes he has come to the same conclusion as we have about the shift and he is now spreading the word in England. We would be in jail if there was anything wrong with or in error in this book.

Let us not let the Russians beat us again

in this program to save civilization, so

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open all doors

by HARRY HARRISON
and HUBERT PRITCHARD

Cole Everard was fighting for more than the freedom of these men, and for his own professional future.

IF COLE EVERARD had just taken one moment to think about what he was doing, he would have known that there wasn't a chance in the world that he could succeed. But he was too carried away by the grandeur of his discovery to care: he wanted to tell the whole world that he was on the track of a cure for the most tragic of all mental ills—schizophrenia.

The whole world of Devanel hospital was embodied in the corpulent figure of its director, Dr. G.A.B. McChesney, who didn't want to see Dr. Cole Everard—a feeling which grew stronger with each passing moment of the interview. Everything about the young researcher, from his gray wiped coat to the smell of experimental animals which never quite left him, was an insult to the dignity of his office.

Everard placed the vial tenderly on McChesney's desk and eyed it with the fond look of a father with his first-born.

"It's something completely new, Dr. McChesney. I brought it up to you just as soon as I was sure it worked. And it does! The few drops

Harry Harrison, writer and editor now living abroad, and Hubert Pritchard, take us one step further here in the story of Man's conquest—Tomorrow—of the ultimate disease. We are particularly happy to publish this interesting story, representative of thoughtful SF at its best.

in this jar are all I have so far. It's a cofactor that goes *directly* to the biochemical lesion in schizophrenia. If it works out in practice—and I'm sure it will—we will have the greatest discovery in cortical drugs since Dilantin completely knocked out epilepsy. Schizophrenia will be just another bad memory like the black plague and smallpox!"

Dr. McChesney pushed the sticky bottle off of his neat stack of correspondence and thus managed to control his temper.

"Dr. Everard, I know nothing about this cofactor of yours and frankly I don't care—unless it has something to do with the urinalysis series you're doing on Dr. Snyder's adrenalectomized patients. You do realize that your part of the program has fallen behind schedule."

Cole didn't even notice the storm signals or hear the distant rumble of thunder in McChesney's voice; his eyes were still fixed on the golden vision of his cofactor.

"This is infinitely more important than Snyder's adrenals—not that his work isn't important—but this cofactor may change the *entire* approach to mental disease. Jung himself admitted that schizophrenia might be caused by biochemical poisoning—and here is the proof that he was right!"

McChesney had stopped

listening. He had held his patience quite enough.

"Everard, under just what authorization have you conducted these experiments? And what fiscal deposition are you using to finance them? This hospital is run—"

"I know, run like a calculating machine—without even an artificial heart to pump a little blood through it!" Cole shouted, letting his anger get the best of him. "You haven't heard a word I have been saying—my experiments are infinitely more important than any number of chopped up adrenals—"

Cole was right, McChesney had *not* heard anything he said; he heard only the tones of insult and the sound of good money being rolled down the drain.

"That's enough, Everard—more than enough! In the past I have supported your insults because I feel you are a valuable man on our staff and an asset to this hospital—when you do your job! But if you don't deliver a statistically integrated report on the urines of Dr. Snyder's patients, and direct your energies to projects approved by this staff—and not freely appropriate time and budget money—then you may suddenly find yourself with all the time in the world. Outside of Davenel Hospital!" The words were roared out by the infuriated McChesney, finger shaking in Cole's

flushed and swollen face. He dropped limply back into his chair and fumbled a thorayine pill out of his drawer, washing it down with a cup of water.

Cole Everard was standing now, angry as the doctor. He opened his mouth—and at the last moment realized McChesney wasn't buying a word that he said; and anything else would only bring the whole works down around his head. Turning on his heel, while he could still control the dregs of his temper, he stalked out of the office. Back in the lab he threw 50 cc's of grain alcohol into a beaker, cut it with 40 cc's of distilled water and threw the mixture down his throat in one gulp.

Then he dropped onto a stool and brooded into the blue flame of a bunsen burner. What could he do next?

The cofactor *worked*—he would stake his life on that. He had tried it only on dogs but the results were more than favorable. It was a good thing McChesney didn't know about them or it would really be in the fan. It was frustrating. He couldn't prove the cofactor worked until he extracted a greater quantity and did controlled tests with human volunteers.

Growling to himself he opened the door of the storage cabinet and put away the bottle of cofactor. As he did, his eyes caught a gleam from a small, golden tube.

And he stopped. Still. Transfixed by inspiration.

The tube was a lipstick, left there by Jean Telfan. She had left it in the lab the last time she had been there—to bawl him out for breaking a date, he realized with a guilty start. Jean liked him, and he liked her when he had the time. And just as important, Jean was the daughter of Grisby Telfan, one of the most important members of the advisory board of the Lambda Foundation.

It was as simple as carbonic equilibrium— $\text{H}_2\text{O} + \text{CO}_2 = \text{H}_2\text{CO}_3$. If he couldn't work at the hospital he would get a grant and use that to finish the tests. He would get Jean and explain everything to her; once she understood the importance of the work she would easily convince her father that a Lambda grant was in order. Groping through the papers on his desk he found her number.

He hummed while he dialed; things were going to turn out. And Jean was a blood technician herself; she would understand when he explained what the cofactor was all about.

JEAN came over at five-thirty, as soon as she was out of work. Cole waved her to the only chair in the lab and sat down on the edge of the bench across from her. She liked this boyish-looking man with the broad grin, and she

didn't care who knew it. Before sitting down she kissed him and tried not to smile at his sudden flush.

"Jean, it's sure nice to see you. And have I got good news for you!"

She sighed lightly and waited patiently. She knew from past experience the "good news" would be about the facts of nature, not the facts of life. Some day she would break through the scientist and find the man—but it was a long, hard fight.

Cole noticed none of this: it was cofactor all the way.

"I'm going to start from the very beginning," he said, "because I want you to get the whole picture, just what happened and why.

"I was running a standard test on one of the patients here, Martinson, a schizophrenic. I found a number of ketosteroids in his urine that I had never run across before."

Jean's brows knitted in thought. "The only ones I can remember are the 17-ketosteroids; urinary breakdown products of hormonal origin, aren't they?"

Cole nodded. "That's right, well these other ketosteroids puzzled me and I looked for other keto positions on the phenanthrene nucleus.

"Just about this time Martinson went on shock, while I was trying to locate the positions of these new keto groups. I didn't bother re-

porting my findings to the clinicians in charge of the case because I really only had a chemical curiosity. Just a few tired ketosteroids that meant nothing in themselves. Then came the shocker.

"Martinson had finished the usual fifty insulin comas and had made a decided improvement. You know—resumed contact with reality and was less anxious. I got another urine specimen from him at this time and ran an analysis. The results seemed impossible and I did it over three times to make sure.

"The extra ketosteroids weren't there any more!"

Jean caught the significance of this, but before she could say anything Cole rushed on.

"I know—slim evidence and all that—only one patient. But I knew where to look. I did analyses on seventy-six other diagnosed schizophrenics here in the hospital and all but *three* turned out the same way. You see the enormous significance of this? For the first time a demonstrable biochemical difference in the "insane" has been shown. This was six months ago."

"And now where are you?" Jean asked eagerly, caught up by his enthusiasm.

"I'm almost afraid to say, Jean—it's so big. In the beginning I had a number of possibilities for the difference, but gradually I elimi-

nated them all except one. My unknown steroid, something that was normally manufactured by the body, was not getting to its destination. The body is filled with chemicals that never appear as breakdown products; they are completely involved in an internal cycle. Well, my steroid was being manufactured by the body all right—but it was not getting to its destination in the brain tissue of schizophrenics. When it kept piling up in the blood stream the kidneys started to eliminate it. This suggested to me that some *cofactor* was missing, some chemical lever required by the body to properly utilize the steroid.

"After that it was just hard pencil and paper chemistry. I worked it back and forth ten ways and finally figured out that *if* a cofactor was missing that could utilize a steroid like the one I found, then the cofactor *should* resemble the respiratory enzyme apoferritin. I was still shooting in the dark. Looked good on paper but I had nothing in the flask. I ran a lot of normal blood samples and found the predicted cofactor in all of them."

"And in your schizoids?" Jean asked.

"Not one of them," Cole said with more than a touch of pride in his voice. "Not one of them had this predicted cofactor. I had found a real biochemical difference in

the schizophrenics—that we can *change!*"

"I see what you're aiming at," Jean said. "You can effect a cure by simply replacing the missing cofactor; it doesn't really matter if you understand the basic mechanism or not at this time."

"Right!" Cole was jubilant now. "Like treatment for diabetes. The whole sugar metabolism is poorly understood as well as the basic role of insulin—yet the treatment with insulin is successful."

Then Cole's face fell as he remembered.

"But I can't do a thing; McChesney has forbidden me to work on the tests. If I could get a grant from a foundation I know I could finish the work."

Jean hoped that her feelings didn't show on her face. She *had* been wishing Cole had called her over just to talk about his work, share his confidence with her. Now it looked like the only reason she was here was to help him gain access to the coffers of the Lambda Foundation. But even that was something. At least there was some way she could help him, be near him. Then she remembered.

"I'd like to help you Cole. I'm sure my father would see your work deserves a grant. Only—all the grants have been assigned for this year. I'll ask him anyway. In six to eight months I know..."

"Six months!" There was

real agony in his voice. "I have to do the work *now*. There is such a little bit left to do, the hardest part is finished. I can't wait six months."

After that the conversation waned and died a natural death. Cole scowled to himself and barely roused himself enough to wave when she left; he was scarcely aware of it. He was never really aware of the unhappiness on her face.

THERE was only one thing to do—and Cole did it. While his assistants made out as well as they could with the urinalysis of Dr. Snyder's patients, Cole devoted all his time to his own work. The distillation of a sufficient quantity of cofactor to administer to a hundred people was a time-consuming project—it even involved incubation for a period with mouse kidney to remove a radical on the nitrogenous ester.

Then everything started to go to pieces all at once.

The day began like any other one, only at 11:00 there was a call from Dr. McChesney's secretary. Dr. McChesney wanted to see Dr. Everard at once. Cole pulled off his lab coat with a feeling of guilt. It was impossible to keep anything a secret in a big hospital—he had a good idea why McChesney wanted to see him.

He wasn't wrong. Dr. Mc-

Chesney sat behind the desk like a wrathful buddha and pierced Cole with a 200,000 volt glare.

"Everard, word has reached me that you have continued with the experiments I expressly forbid. Not only that, but I understand you have applied for funds to continue these experiments from sources outside of this hospital. In your application you said something about wanting to set up a massive program to cure every mental patient in the country."

Cole's collar was getting warm.

"Just a minute," he said. "What I do in this hospital may be your business, but you have no call to go snooping outside of it. If you have some friend on the board of the Lambda Foundation who has seen fit to disclose confidential information to you—well, I hate to say what I think of his spying and your actions."

He was shouting when he finished and McChesney matched him tone for tone.

"You have no right to judge anyone! You applied for funds towards a project never approved by the board of this hospital. In addition you misused hospital funds to continue those same experiments—incredible, impossible experiments! At least, if there was some rational excuse for your actions. But a miracle drug to cure mental

patients! Haven't you ever heard of environmental conditioning? Don't you think Freud contributed *anything* to psychiatry with the concept of evolutionary development of the ego-id complex..."

"That's enough McChesney—that's enough!"

It was just too much. Cole's temper snapped like a dried out rubber band and he roared at McChesney, banging the desk so hard that the ink bottle bounced to the floor. McChesney dropped back into his chair, just a touch of fear in his eyes.

"Who are you to talk about medicine; you haven't practiced on anything more human than a balance sheet in the past thirty years! You haven't the brains or capacity to *understand* what I'm talking about. I tell you I have the answer the world has been seeking for thousands of years—the answer to mental illness! One out of every mental ward in America—in the world!"

Dr. McChesney stopped listening then, though Cole kept talking. The thought had hit McChesney that this man wasn't talking like a rational research worker—these insults, these grandiose statements. The occupational hazard of working in a mental hospital was the chance of a breakdown yourself. And Everard was showing all the symptoms. The symptoms fit

something McChesney had noticed that morning.

Quietly he slipped open the top door of his desk and looked at the personnel record inside it. It was Cole Everard's record—open to his history, to an entry that had puzzled Dr. McChesney.

1946—2 mths. in Psychiatric Ward, U.S. Military Hospital. Glenning, Georgia.

It was obvious now—he should have recognized it before. The poor fellow was having a relapse. Probably long swing manic-depressive who got into trouble every five or ten years. A few months in the ward would fix him up. Maybe a little electroshock therapy; probably wouldn't need any more than that. When Cole finally stopped, out of breath, McChesney spoke quietly.

"Well—I hadn't looked at it in that light before, Everard. But you're right in one thing: I don't think I am qualified to make any final decisions about your work. Too long behind this desk, as you say. I would feel better if you explained the whole thing to Dr. Viner, I'll just have him step in."

He pressed the button on his intercom and put in a call to Viner while Cole sat there, his jaw hanging open. Victory had come so suddenly he couldn't tell what to make of it.

He never saw the obvious, even when he asked McChes-

ney, "But—why Dr. Viner—he's head of the clinical wing? Wouldn't a lab man be of more use here?"

McChesney smiled. "I always consult Dr. Viner in these matters. He's a good all around man. Ah—here he is now."

Dr. Viner shook hands, then turned to McChesney who explained.

"Dr. Everard here has made a rather remarkable discovery. It seems he has a cure for insanity—just a simple injection." As he said it, he tipped Viner a wink that Cole didn't see.

Dr. Viner gave an involuntary start, then regained his composure. He had seen too many associates locked in their own wards to be completely surprised.

"Tell me how it works, Everard—I'm most interested."

"A matter of replacing the missing cofactor," Cole began—and continued that way. He was excited and told his story in confused fashion, skipping back and forth from point to point. His enthusiasm got the better of him and Dr. Viner very shortly began to understand why McChesney had called him.

When Cole had finished, McChesney asked him to wait outside, then played his ace card for Dr. Viner. He had a tape-recorder in his desk: all of Cole's earlier angry words had been recorded. Dr. Viner

listened to about half of it, then interrupted.

"I'm afraid you're right, Doctor, we should hold him for observation. We had better take some steps to make sure he doesn't do himself or anyone else any violence."

They made a call and went out and talked soothingly to Cole. His enthusiasm had cooled and he was just catching the odor of rat when the outer door opened. Powers came in, the attendant from 2 West, and his assistant Schwartzkopf, six feet of ex-stevadore. When Everard understood, he roared with anger and they reached for him. In four seconds he was immobilized on the gray carpet. It was the worst possible thing he could have done. Violence was no good against the trained heavyweights and after the wrestling match nothing he could possibly say would convince the two doctors a mistake had been made. He tried to talk and they politely ignored him.

"Take him to 2 West," Dr. Viner said. "He can have freedom of the floor unless he causes trouble; in that case isolate him. And tell Miss Trask, the duty nurse, to get in touch with me. I'll write the orders for Everard when I make afternoon rounds."

Thirty minutes later a slightly dazed Cole found himself sitting on a bench in 2 West, his belt and shoelaces gone and only a handkerchief

in his pockets. The whole world was in ruins about his ears and it took some getting used to.

All of his plans now had to resolve around his new status as a mental patient. From working in the hospital he was well aware of how complete the legal, personal and physical control was of committed patients. He also remembered from personal experience.

Rightly enough, he suspected that his medical record had some bearing on his confinement. He hoped they would get his records from the army to investigate; the record, he knew, was all in his favor. He had been working in a field hospital then, under fire a good part of the time, and no chance to rest. It finally got to him after almost four days without sleep. Shell-shock, nervous breakdown, combat fatigue—call it what you will. It just meant the human machine had been stretched past its final endurance and broken down. His hospital confinement and cure had consisted mostly of sleep, food and vitamin shots. Cole wondered how much of that was in the record.

Fear nibbled at the edge of his mind and troubled his thoughts. *NO!* He was *not* squirrely, no matter what they thought. If he could keep control of himself even this spot could be gotten out of. The cigarette began to

singe his fingers and he ground it out. Taking another one from the pack on the table he went to the attendant for a light and sat back down on the bench. *Think.* There had to be an answer.

It was dinner time then and the patients lined up. Cole joined them, glad of the distraction. They filed in and the door was locked behind them. The barely-warm food was almost edible, soft and soapy so you didn't even miss the knife. When they had finished, and the silverware was carefully counted, the apathetic line of men filed back to the cheerless ward.

COLE stayed awake late that night, barely aware of the men around him in the ward and the everpresent attendants with their flickering flashlights. He rejected one idea after another until there, all at once, was the perfect plan. It was dangerous, seemingly insane (what better kind of plan for this place!) and might not work. But it was worth trying.

He would test his cofactor right here—under their noses.

In the morning he watched the routine of the ward carefully so he could adhere to it. He didn't want to be noticed or receive any special attention. After painfully shaving with the ward razor under the watchful eyes of an attendant—a bolted-shut razor that was used by twelve men and the blade changed

once a week—he went in with the rest for a tasteless breakfast. That morning he had his first interview with his assigned psychiatrist. He was Harlod Brennan, a first rate clinician whom Cole met casually once or twice. They had a pleasant conversation and Brennan made the decision Cole had been hoping for. There was to be no hurry about treatment, a few weeks' observation first. If organic therapy had been begun at once, Cole could have done nothing.

He wrote a letter to Jean Telfan which, after careful censorship by the staff, was forwarded to her. While only immediate family usually was permitted in on first visits, Brennan O.K.'d her coming, and on Saturday she showed up.

She came in with a quick step and a smile—but he could tell by her sideward glances she was unsure of herself. In spite of her years of work in medicine she had no firsthand knowledge of the inside of a mental ward. She couldn't realize that every patient there was more insecure and ill at ease than she could possibly be. Cole spent the first half hour just chatting until she relaxed, then began his carefully worked out plan to enlist her support. First and most important, he had to assure her of his own sanity and the validity of his discovery.

"As you can plainly see," he said, "Dr. McChesney doesn't think too much of my work." Even though he tried to sound cheerful when he said it, Jean blushed and looked unhappy.

"Oh, Cole...how did you ever end up here, are you—I mean..."

"A little off my rocker?" he answered. "I don't think so—and I imagine the doctors will be finding that out soon too. I guess my theory and discoveries—certainly their presentation—were a little too radical to accept."

Jean bit her lip and wouldn't look directly at him. Leaning forward, Cole took her hand, trying to communicate the urgency and importance of his words.

"I know what you're thinking and I can't blame you. Here I sit in the loose-bolt factory and have the nerve to say that they are all out of step but me. Sounds like I belong here. But it is not only *me myself* who is challenging the old ideas—there is an entire new body of thought and experiment on the subject.

"Serum has been removed from the blood of patients suffering from paranoia and injected into the arms of healthy volunteers. These volunteers then manifested *all* the symptoms of paranoia! Do you get the significance of that? No textbook theory of an oedipus complex can apply here—the volunteers

had mental disease symptoms by purely biochemical means. Hallucinations have been produced by tiny doses of such drugs as mescaline. On the other hand, the reverse has been done—patients drawn out of mania under treatment with chlorpromazine and rauwolfia serpentina."

Jean was interested, but not completely convinced.

"Cole, are you saying that all the work in psychoanalysis and expressive techniques has led up a blind alley? That so many brilliant men are all wrong?"

"Of course not. The people my cofactor therapy is designed for are *beyond* analysis. Some of them can't even open their mouths to utter an intelligent syllable no less grapple rationally with a problem. And incidentally, if couch analysis can be brought down from its present answer-all position it won't be the first time the old gave way to the new; it hasn't been so long since people thought the whole nonsense of astrology was a real science.

"All I'm saying is that the cofactor is a provable phenomenon—let's test it."

They were interrupted by Vattelli, the catatonic, who jerked into his erect, unseeing rigor a few feet from where they sat. To Jean it was an awesome spectacle, a man so descended into the caverns of his own mind that he was momentarily uncon-

scious on his feet. But to Cole the urgency of the problem was driven home, the crying need of men like Vattelli could not wait.

"If only I had had a chance to finish the experiments, they never would have popped me away in here." Jean nodded and he continued quickly. "Or if I could finish the experiments now, actually inject some patients, that would be proof—they would have to let me out."

"I—suppose so," Jean agreed with him, but not so positively. "But of course you couldn't do anything about it while you're still in—here."

"Yes, I could," Cole said, leaning close to her, "if you would help me. I could tell you where the cofactor is and what I would need. You could easily get it from the lab and bring it in here next Saturday."

"No" she said, standing up suddenly. "I mean—do you think that would be wise? After all, it might not work and, perhaps it would be better to wait awhile." There were tears in her eyes and what could only be fear.

Cole was horrified. "Jean—don't you believe me? Just because they have me locked in here, does that make them right, and me wrong?"

"Well—they must have had a reason..."

He dropped back on the bench, defeated. He had expected too much from her.

Maybe she loved him, as she said, but she couldn't violate society—go against The Men Who Knew. There could be no mistakes. He was locked up. He was nuts. That's as far as she could see. She would make excuses but she would never help him.

Their conversation lagged after that and she left early. Neither of them suggested that she return the next Saturday. She had a handkerchief to her eyes when she went out the door and Cole felt she was walking out of his life as well.

It hurt, but she could hardly be blamed for hesitating. There was going to be no one to help him, he would have to go it alone. His original plan still held—only he would have to get the cofactor by himself. His lab was upstairs in the same building—that helped.

It would still mean that he would have to make a break for it; at least escape for awhile from the constant vigilance of the attendants. One by one he ran over the possibilities.

TWO weeks slowly passed and time was beginning to run out. He had to get to his lab for the cofactor—but the ward doors were always locked and the patients never allowed out. With one exception: when they went to hydrotherapy. The patients were sometimes nervous on the way there, though after

the relaxing water the return trip was peaceful. This was the time Cole would make his break.

The next day in hydrotherapy he tried to be part of the crowd so he wouldn't be noticed particularly. Laughing, he pushed Hardy out from under the eight foot stream of water and was himself pushed out in return. Then the period was over and they dried themselves leisurely and dressed. Walking slowly the group began to make its way back to the ward.

The attendants stood at each cross corridor in case anyone should break free and try to run away. There was no place to go with all the doors locked, but many patients just had the irrational desire to run. As they approached the elevator, Cole tensed. This was it.

"Look out!" he shouted, "Wyckoff has a knife!"

With smooth experience Nurse Welle and the attendant Schwartzkopf separated the group from Wyckoff who just stood there fluttering his hands. That was all Cole waited to see, then he ran towards the fire exit.

This was the only way. The elevator operator knew which prisoners were allowed freedom of the building, so that was out as well as the locked stairway. But the fire exit was never locked.

"Stop!" Miss Welle shout-

ed, but it was too late. Even as they started towards him he had the door open and was going up the stairs two at a time. The heavy footsteps of Schwartzkopf thudded up behind him.

It was three flights up and he was winded when he made it. Slamming open the hall door he raced to his lab. The hall was empty and so was the lab—they were all at lunch. This was a piece of luck he hadn't counted on and he made the most of it. He had planned every motion for days.

First to the cabinet to grab a double handful of co-factor ampules; they went in his right pocket, and a handful of morphine styrettes was jammed into his left. On top of the ampules some #20 sterile needles and a syringe. He had just groped a length of rubber tubing out of the back of a drawer when Schwartzkopf burst in through the hall door. The tubing fell when he tried to put it in his pocket on the run and he had to leave it. Darting through the connecting office he made it back to the hall and the stairwell.

Getting back to the group of patients below was easy—it was the one direction they didn't think he would go. Cole raced out of the fire exit door and smashed into the astonished patients. There was only a moment and he made the most of it.

"Hide these," he said, handing the ampules and needles to Hardy. With the unspoken allegiance against authority Hardy stuffed some of the things into his cuffs and put the remainder in his mouth. He didn't know what they were and he didn't care, it was enough that they were *against* the authorities.

When the exit door banged open again and the panting Schwartzkopf ran out Cole was fifteen feet down the hall. A second attendant appeared at the junction ahead and in a moment they had caught Cole and threw him on the floor. Hustling him back to the ward they searched him thoroughly—angry at his escape; a knee in the groin and a kick in the kidney were part of the search. The morphine styrettes were easily found and the attendants were satisfied. They left him lying on his bed, in pain but happier than he had been for weeks.

Dr. Brennan immediately sent for Cole, but could get no satisfaction. They talked in the interview room for about twenty minutes, then the puzzled doctor sent Cole back and confined him to the ward.

With an ease born of experience with illicit food and matches, the patients kept the ampules and syringe out of sight of the watchful attendants. From the box of scrabble pieces to the radiator they

went, constantly on the move since the ward was routinely searched thoroughly twice a day. The patients didn't know what they were hiding, they just helped to join in any resistance to the omnipotent authority of the hospital. That evening the things reached Cole as he sat in the television room after dinner. Waiting until the program was over, he left and went into the ward. Standing next to one of the metal framed windows he looked down at the city lights below.

At the same time he squeezed his upper arm tightly against the book underneath it, compressing the brachial vein. Keeping a close look behind him in the mirror-like dark window, he carefully slid the syringe out of the front of his shirt. The small veins on his wrists stood up clearly and he emptied the syringe full of cofactor into one of them.

A few minutes later Hardy passed by and he slipped him the syringe. Hardy would take care to see that it and the other ampules weren't discovered. Cole had no idea what his own physical reaction might be and didn't want the things found on him. He went to his bed and sat on it to wait.

It is a dangerous procedure to test a new drug—prison volunteers are used whenever possible. But it is far from unknown that a research

worker will test an unknown drug or chemical on himself and is one of the high causes of mortality in the field. Cole thought wryly about that as he waited—then the reaction hit.

A wave of nausea first—he barely made the bathroom—followed by what felt like a high fever. Even in his agony he wished he could take his temperature—as well as running some hematology and urine studies on himself. Back on his bed he almost passed out.

The staff thought he was quite ill, but he wouldn't talk to them. They finally decided that the physical reaction was part of the complex that started with his "elopement," as they called it, so they left him alone.

WHEN two days had passed without further incident, Cole was sure that the cofactor was safe for physically sound people. He wouldn't try it on any of the other patients with long standing physical defects or history of pathology.

After careful thought he selected three of the worst cases in the ward, cases in which any change would be dramatic. First Wyckoff the bird with his constantly flapping "wings." Then Schefflin the paranoid who was so positive that the F.B.I. was after him that he wouldn't even answer to his own name. The last case—and the severest

test of the cofactor—was Friedman. He had lost *all* contact with reality; sitting in his own waste he had reverted to the vegetable. Not only would these men be good subjects, but he could treat them without their even wondering who he was.

Cole had qualms about treating helpless men, without their permission. Inadvertently, Dr. Brennan killed these fears without even realizing it.

"I've examined your X-rays and EK-G," Dr. Brennan said at their next session. "Your cervical spine is normal, Everard—as well as your heart."

Cole knew very well what that meant. Electric shock therapy. When the current was applied to the brain the generalized discharge from the motor cortex could stop the heart or actually cause the comatose patient to fracture his own spine by muscular contraction; the patient had to be in good shape for E.C.T.

"What if I told you I didn't want this therapy, what would you do then?" Cole asked.

"You're a trained man, Everard," Dr. Brennan answered, "so I'm sure you understand that in cases like this we know what is best for the patient. I don't usually explain to patients why I am giving them ECT, but in your case it is slightly different. For awhile I thought there

was nothing wrong with you, that you were just a little overwrought and excitable by nature. But that unexplained attempt at elopement forces me to only one conclusion. You're somewhat confused and could benefit from a short course of shock—just six or eight—these would relieve some of the pressure that seems to dog you."

"I don't want shock therapy, I refuse to take the treatments."

"I'm sure you will feel differently after the treatments," Dr. Brennan said smoothly. "It's a very benign procedure—why we even do it on an outpatient basis now."

Back in the ward Cole found that his qualms about attempting to treat the other patients had vanished. He had four days before his shock therapy was to begin, he had to make the most of it.

Friedman, the vegetable, was the man to start on, he was completely unaware who was handling him. That evening Cole tied his handkerchief around Friedman's arm while talking engagingly to divert the attention of anyone who might be watching. He broke the top off an ampule, filled the syringe, and eased the needle into Friedman's antecubital vein; it was large and he had no trouble.

It was over in a moment. Fortunately the dose of cofactor, though somewhat viscous, was a very small

amount. Cole thanked his luck that the cofactor didn't have to be administered like an ACTH drip—ten hours a day for a week!

There was the beauty of it. Just as reserpine unbound serotonin in a ratio of 1:1000, the cofactor surely operated at these same binding sites in the brain in the same staggering ratio. *That would be interesting to demonstrate*, he thought, *after I'm out of this place*. If it works, came the sobering thought.

So far so good. The sooner he finished the less the danger of discovery.

"What are you doing?"

Cole spun around to see Schefflin looking at him with suspicion in his eye. "Are you preparing a secret report to the Government agents about me? Are you an agent?"

"Schefflin," said Cole. "I've got the answer, right here in my pocket."

"What answer? What answer?"

"How to take the men off your trail once and for all."

Schefflin looked around. "We can't talk here—let's go over behind the big lamp."

In the corner Cole pressed his advantage. "I have a medicine that will so change you that no one will ever again be able to follow you. They won't know you. You'll be a different man. I'll give some to you if you promise not to tell anyone."

"I don't like medicine—it's

all just sugar pills to fool you," said Schefflin.

"This one *hurts* a little as it goes in so it must be good. The only other man who ever received it was so changed I couldn't identify him myself."

The highly suspicious Schefflin gradually became interested, and what swung him over was the fact he liked Cole. A week later he might think he was J. Edgar Hoover's right hand man, but for the moment Cole was "in," both in Schefflin's mind and now his venous system. The "secret" part of it all appealed most to Schefflin. He was letting Cole "hide" something in him.

Wyckoff, the bird, was literally caught in mid-flight by Cole who infused him between the short flappings of those lightly poised arms. Wyckoff said "Ow" but didn't stop flying.

Cole leaned on the open window ledge to replace the syringe when the attendant's voice cut through his thoughts.

"Everard—what are you doing there—what do you have?"

Schwartzkopf's heavy footsteps approached and Cole did the only thing he could. If the syringe and ampules were discovered now the whole game was up. With a quick snap of his hand he sent the vital drugs spinning out into the night. They made

a faint tinkle when they hit the bushes in the empty lot far below.

A heavy hand spun him around and beetle-browed Schwartzkopf was looking searchingly at the window ledge.

"I was just getting some air," Cole said.

Still suspicious but not able to prove anything, the attendant went away. Cole slumped on a bench, suddenly weak. The whole thing was out of his hands now. The men he treated might need more than one injection to show any change; hopefully one was enough. There was nothing more he could do—except worry. This he did very well until his nails were all even with the flesh.

The next day, Sunday, the resident doctor on duty, Dr. Polter, was called for three sick men. He diagnosed mild food poisoning and recommended bed rest for Wyckoff, Scheffling and Friedman. But when the nausea persisted, a frightened Schefflin enlisted Nurse Fleck in his confidence.

"Don't tell the doctor," he said, "but I think it's the medicine that Cole hid in my arm, right here."

Miss Fleck was smiling when she examined the arm; you shouldn't combat a patient's delusions. Then her eyes widened as she saw the unmistakable sign of a venipuncture with its minute he-

matoma. A quick examination of the other two patients verified her suspicion. She called Dr. Polter and he brought in Dr. Brennan because of Cole's involvement in the case. They couldn't diagnose the patients' trouble; they questioned Cole. He gave them no satisfaction at all, flatly refusing to answer their questions, disclaiming all involvement.

They locked him in the isolation room and returned to the bedridden patients.

Cole spent a long night locked away from the ward. There was no furniture in the isolation room, not even pads on the walls. Just the door, a wired window high on one wall, and a bare rubber mattress on the floor. It was almost dawn before he could fall asleep.

He woke up with a sudden start—then remembered where he was. From the angle of light through the window it looked to be about seven in the morning. Yawning he walked to the door—and froze.

There was a six by six wired window in the door and through it he could see one corner of the dormitory. Wyckoff was sitting up in bed—sitting still! The "bird" was gone, for the first time since Cole had known him the man's arms weren't in motion. Wyckoff looked a little dazed. He turned to Friedman in the next bed and said

something. Friedman, the human vegetable, the man who hadn't uttered a meaningful sound in two years.

Friedman looked just as dazed as Wyckoff—but he answered him. They talked for a minuted then Friedman rolled over and went back to sleep.

The cofactor worked—one shot was enough to effect a temporary cure! Now all he had to do was prove it to the authorities.

He didn't know how long the effect would last; he had to act at once. When Schwarzkopf opened the isolation room door for breakfast, Cole was behind it; his doubled fists caught the big man in the back of the neck and he dropped without a sound. Stopping only long enough to take the attendant's passkey, he stepped out and locked the door behind him. Hardy was watching him with a surprised expression.

Hardy and three others of the most rational patients listened to Cole when he explained what he had done. These were men for whom reality had slipped, but had not gone. They were intelligent and receptive—and wanted so much to believe what he told them. Each of them had a part in concealing the ampules of cofactor, so they knew he had given the shots. The obvious improvement of the three injected patients was his selling point.

Miss Trask looked up from her desk near the ward door—then gasped when two of the men grabbed her arms.

"Don't worry," Cole told her, "we're not going to harm you or cause any trouble. We just want you to go with us to see Dr. McChesney. We have some news for him."

They unlocked the door and pushed the frightened nurse in front of them, helping along the injected patients who were rational though more than a little confused. The elevator operator didn't argue with the grim faced men, just took them to their floor. Moving fast, the knot of men reached McChesney's office and burst in.

The director started up from his chair—then dropped back with a gasp. Cole pushed Friedman to the front.

"Dr. McChesney," Cole said, "I want you to meet one of your patients, Mr. Friedman. He's been in a vegetable state for two years—until I injected him with my cofactor."

Friedman just stood, blinking at McChesney, his jaw limp. Then he seemed to gather himself together and his mouth worked silently for a moment.

"How do...you do..." he said slowly, in a rasping voice.

Wyckoff, the former birdman, stepped forward of his own accord and shook McChesney's limp hand.

"Very glad to meet you

doctor. I've been in this hospital quite awhile but have never had the pleasure..."

"Help!" McChesney shouted suddenly, groping the phone off his desk. "Operator—quickly—alert the building guards and call the city police! An outbreak—yes, here—in my office..."

It was no use. You couldn't fight a man like McChesney. White would always be white to him. The effects of the cofactor would wear off soon and the proof would be gone. Cole groped for an idea, but he was licked.

"I would cancel that call, doctor," a voice spoke from the doorway. Dr. Viner was there with two guards, but he was waving them back. Walking into the room he took the phone from McChesney and canceled the call himself, then turned back to the waiting room.

"I'm afraid, Dr. McChesney, that we have made rather a grave mistake by confining Dr. Everard. I came up with the guards soon after he did and listened from the hall. I know these three men he has injected, they are all patients of mine. This cofactor works—and works marvelously."

He took Cole's hand suddenly and his voice was hoarse with emotion.

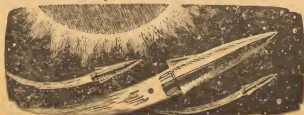
"Dr. Everard, your cofactor is a tremendous discovery; I want to be the first to tell you that. I've worked in mental institutions many years—you've been confined in one so you will know what I mean—what I feel, towards these men and women. That they will be free at last of their terrible affliction.

"I hope we will be able to—well—throw open all the doors.

The patients were on their way back to the wards and a new future when Dr. Viner stopped Cole in the doorway.

"It is a hard thing to admit you have been dead wrong from the start, Dr. Everard, but in this case I don't mind too much. On the other hand, you know that your temper is rather violent, and that is what got you into this trouble in the first place. I really suggest you do something about it. Perhaps consult a psychiatrist?"

Cole started to laugh. He thought Jean Telfan might like to hear that. He would call her—soon.



sense of wonder

by BERTRAM CHANDLER

It was dark on the Heath and the wind was cold. He watched as it neared him—the metal gleaming in the starlight.

"SCIENCE fiction isn't what it was," said Crowell.

"Was it ever?" asked Samuels.

"Not very funny," said Whiting. "I agree with Bill. Science fiction isn't what it was—and for that I blame the authors and publishers of factual books on astronautics and the like. If those books had to be written, their sale should have been restricted to science fiction writers only. Our predecessors in the field had it easy. Their bold heroes could leap aboard their spaceships, press a couple of buttons and whiffle off to Proxima Centauri at fourteen times the speed of light. They didn't have to worry about escape velocity, mass ratio and all the rest of it. The Lorenz-Fitzgerald equations meant nothing in their lives—or the lives of their readers. They could populate Mars with beautiful, oviparous princesses (I've often wondered why John Carter's girlfriends had such well developed mammary glands) and get away with it." He lifted his glass. "Here's to the good old days, when the likes

It is getting a little difficult to describe A. Bertram Chandler, one of the most prolific—and interesting—of the British writers in this field. Here Chandler touches on a different aspect of the change in Science Fiction commented on, last month, in this magazine's book column.

of us didn't have to beat their brains out trying to satisfy a public of potential Ph. D.s!"

"All very well said, George," admitted Crowell, "but it wasn't quite what I meant. After all, I'm an editor and, as such, I read far more sf than either you or John. My growl is this—so very little of the stuff written today has even the slightest touch of the old sense of wonder. You were sneering at Burrough's Martian romances just now, weren't you? I agree with you that they're far from scientific. But if you're honest, you'll agree with me that Burrough's Mars was a far more wonderful place than, say, Clarke's. Barsoom was *real*, in a way that the planet reached by orthodox rocketry, populated, or otherwise, according to sound scientific principles, never has been..."

"You started this," said Samuels. "You're an editor—you decide whether to buy our stories or to add to our fine collections of rejection slips. Therefore—kindly define this sense of wonder. If we knew what it was we could saturate our work with it..."

"If I knew just what it was," said Crowell thoughtfully, "I told you blighters just what I wanted..."

"Perhaps," said Whiting, "it all ties up with what I was saying. Look at it this way. You're a writer way back in the good old days. You're

even, for the sake of the argument, old H. G. Wells himself. You've gone to all the trouble to invent the Cavorite that the modern rocket boys are always sneering at. But it works for you. And then—*Why, I'm the First Man on the Moon!* you think. Everything's so brand, spanking new. You feel a sense of wonder—and you put it across to your readers. But write a Moon story these days—and where does it get you? Wells has been there before, and Heinlein, and Clarke, and Campbell, and... Well, just tell me the name of anybody who *hasn't* written a first men in the Moon story—if you can! It's the same with Mars, and Venus, and the whole damned Solar System. It's the same with the interstellar voyages."

"Time travel's as bad," said Samuels. "Wells' *The Time Machine* was good, and had the sense of wonder that Bill's been bellyaching about. The only thing that you can do with Time Travel *now* is to give one of the tired old paradoxes a new twist."

"And there's no sense of wonder in *that*," objected Crowell.

"There's a sense of wonder at the author's ingenuity," said Whiting.

"Not the same, George. Not the same. What I'm after, and what nobody will give me, is something on the lines of Keats' 'magic casements

fronting perilous seas...'
Why, *why* can't any of you stare at the Martian desert with as wild a surmise as stout Cortez stared at the Pacific?"

"I wish we could," replied Whiting. "I wish we could."

"THE TROUBLE," murmured Whiting, "is that we're all too blase..."

"I beg your pardon," said the stout lady seated next to him in the carriage.

"I'm sorry," said Whiting. "I was talking to myself. A bad habit of mine."

"It is a bad habit," said his fellow passenger severely. She looked at the magazine on Whiting's lap, raised her eyebrows at the picture of the rather more than half undressed blonde being menaced by something that no self respecting dinosaur would claim as a close relation.

"What sort of impression does this cover make on you?" asked Whiting.

The stout lady hesitated—it was obvious that she was debating with herself whether or not to appeal to the other passengers for help. She swallowed.

She said, "I think it's rather indecent. I think that trashy publications like that are one of the causes of juvenile delinquency."

"There I don't agree," replied Whiting. "But we'll skip that. What I want to ask you is this—does it arouse

any sense of wonder in your br...bosom?"

"Yes," she said with conviction. "A strong sense of wonder that a grown man should read such rubbish."

"I not only read it," he admitted, "I write it."

"That," she said, "is worse."

"But it's useful."

"Useful?"

"Yes. After all, it's all propaganda. Sooner or later the taxpayer is going to have to foot a really big bill—the cost of sending the first manned rocket to the Moon. Science fiction is, as it were, softening up the public, selling them the idea..."

"But why send a rocket to the Moon?"

"Why climb Everest?"

"Yes—why?"

"Well," said Whiting carefully, "I suppose it all boils down to this. There will always be people to whom Everest, and the North and South Poles, and the Moon and the planets, will be a challenge. But we're drifting away from the point. I had a talk half an hour or so ago with the editor of this magazine. He was complaining that modern science fiction just doesn't have the same sense of wonder as the old stuff. We couldn't quite decide what the reason for this is. Frankly, I hoped that a new approach to the problem—*you*—might be of value."

"Is there such a thing as old science fiction?" asked

the stout lady. "I thought that it had sprung up in the years after the war. So I'm afraid that I can't help you. The only advice I can give to you, young man, is to read and write *clean* stuff, something of some moral value."

"Stories by, for and about Boy Scouts," said Whiting.

"Precisely. You will be doing something useful then, helping to combat juvenile delinquency."

"I'll think about it," he said. "Thank you very much, Madam. I get off at this station. Goodnight, and thank you again."

"It was a pleasure," she said, smiling.

THE OLD trout! thought Whiting, as he walked from the station. Still, there was just the chance that she might have been able to bring a fresh viewpoint to the problem. So she didn't. So what?

He looked up at the sky. There's all the wonder you want, Whiting, he thought. Star beyond star, every one of them a sun, and almost every one, if Hoyle is to be believed, with its family of planets. And practically every planet of every star already reached, explored and colonized by some writer—inertialess drives, space warps, and big ships that are almost self-contained worlds making the trip at relatively slow speeds with all hands breeding like rabbits so that their

great great great grandchildren can make the landing...

Oh, the wonder's there—but how, *how* to bring it out? As I said in the train—we're all too blase. Readers and writers both. It used to be said that there was nothing new under the sun—now, in our racket, it's got to the stage where there's nothing new under *any* sun. Take myself—in all the years that I've been writing science fiction I've only come up with one new idea—the mutated rats taking over the spaceship, and then some people said that the story was all too reminiscent of Heinlein's **UNIVERSE**.

He thought, I don't feel like going home just yet. I'll walk on the Heath for a bit, and try to think things out. This sense of wonder business has me a little worried; more than a little, perhaps. How did Kipling put it? *The lamp of our youth shall be utterly out, yet we shall subsist on the smell of it...*

It was dark on the Heath, and the wind was cold. Whiting walked slowly along the path, sucking his pipe. Every few minutes he would pause and look up to the dark sky and the glory of the bright stars. He watched an airliner coming in to the airport—winking, coloured lights against the night—and remembered the fascination of Jules Verne's **THE CLIPPER OF THE CLOUDS**.

That's the trouble, he thought. Just as flying has become commonplace, in actuality, so has space travel because of all that has been written about it... Hello, what's that? An aeroplane without navigation lights? I suppose they know what they're doing—it must be the RAF playing, silly beggars. Funny sort of noise their engines have—too quiet for jets, certainly not propellers...

The thing was coming down. Whiting felt the first stirrings of fear. He could not estimate just where the huge, dark shape was going to land—and did not fancy the idea of being underneath it when it did land. He decided that his best policy would be to stand still—if he had to he could always fling himself flat on the ground the last moment. He wished that there was sufficient light for him to be able to make out some details of the strange aircraft—it had not, he was almost sure, conventional wings. Furthermore, it was coming in far too slowly for anything other than a helicopter—and a helicopter it was not.

The thing was down, about fifty yards from where Whiting was standing. It was big—he could make out that much. Metal gleamed faintly in the starlight. Something tinkled faintly, and something else whirred intermittently, and something clanged loudly. Abruptly there was a

circle of light against the darkness—an opening door?

Whiting walked towards it. Who would emerge from that door, he wondered. Englishmen? Americans? Russians? He supposed that by having witnessed the landing of this obviously experimental craft he would run afoul of Security... Well, it was up to Security to give the captain of the thing a sharp rap over the knuckles for setting his ship down on public parkland.

There was somebody standing inside the door, his body silhouetted against the blue light. He raised his hand—and from the top of the aircraft a spotlight stabbed out, wavered briefly and then found and held Whiting. With half shut eyes Whiting kept on walking. He would, he decided, make a complaint about the bad manners of those who had shone a searchlight into his eyes.

"Will you come aboard?" asked the man who was standing in the doorway.

What was the accent, wondered Whiting. It was hard to place. It was, he realised, more of an *absence* of accent than anything else.

The doorway was a few feet above the rough ground, but there was a short ramp leading up to it. Whiting mounted it cautiously—and, in spite of his caution, slipped on the smooth metal. The man put out his hand to steady Whiting.

The writer looked at the stranger—at his uniform first, to try to discover his nationality.

But the clothing—a sort of coverall of silvery-grey material, with three little golden stars over the left breast—told him nothing.

"Who are you?" asked Whiting, looking at the stranger's face. "Where are you from?"

And you're not from Russia, he thought, or from America. That page boy bob of yours would never be tolerated in the Air Force of either country—to say nothing of the RAF... Odd eyes you have, too—and those pointed ears are rather outre.

"We have returned," said the man. "We left this world at the time of the Catastrophe..."

"But where are you *from*?"

The man pulled Whiting gently towards the open doorway, pointed to the sky, to Procyon.

"From the fourth planet circling that star," he said. "But forgive me—I must ask *you* questions. We learned your languages on the way here—it is lucky that you have advanced sufficiently to have rediscovered radio. We know, too, that you have flight inside the atmosphere—but have you space flight yet?"

"No," said Whiting.

The man led Whiting inside the ship, to a room that

could almost have been a well appointed lounge in a surface ship on Earth's seas. There were others of the crew there—long-haired men and women with their hair clipped short. There were bottles and glasses, and a wine that had almost the potency and the flavour of whisky that Whiting found much to his liking.

At some stage in the proceedings the ship lifted. Whiting was conducted from the wardroom, along a maze of curving alleyways, to what was obviously the control room. He looked with polite interest at the instruments, at the various pieces of apparatus doing odd things in odd corners. He displayed still more polite interest when the Captain—the man with the three golden stars on the breast of his uniform—touched a switch and the deck of the control room became transparent. Earth lay below them—Earth as he had seen it so many times as illustrations to stories, as coloured plates in factual works on astronautics, in science fiction films.

"Interesting," he said.

"And you say that your race does not have space travel!" cried the Captain. "You're looking at something that no man of your time has ever seen—and all you say is, 'Interesting!'"

"The trouble," said Whiting, "is that I've lost my sense of wonder."

lazarus bell

by STANLEY MULLEN

His mind tried to reach out to the shadowy figures. The men hunting him were near, tensed and trigger-happy...

EVER been in a hospital for a long stay? It seems to go on and on, as if somebody has bribed the staff to let you lie in your room while the world forgets you. Your patch-up job after the accident must have been a good one, since you feel better than you have in years, and now you want to be up and out and doing. Doctors keep promising, but nothing happens and continues to happen. So one day you get tired of it all and just put on your clothes and walk out.

THINK, says the sign over the receptionist's desk. But you are in no mood for thinking in capital letters, and all of your thinking lately has been done in hospital vacuum. The receptionist is not there to call someone in authority to do the thinking for her. So, by a fluke, you are actually free. Just keep walking.

A door is open, and beyond that spreads everything you remember about Earth. Real air in your lungs instead of the oddly staled and reprocessed atmosphere of a dome-city on a far-off world. Real sound, instead of the hollow

Stanley Mullen, widely-known Colorado writer, returns with this provocative story of a society, in a not-too-distant Tomorrow, hostile to departures from the norm. A thousand years earlier, Armstrong would have been released into the world to wander like a leper. And now?

echoes inside a space-suit helmet. Around you is a real world with real people, instead of the hushed and sterile unreality of the hospital with starchy-bleak gnomes representing sanitation and right-thinking.

Earth is still here, not something you just imagined in your long years in space. Home, you think nostalgically. And ten years out there is a long time. Spaceman's return. With everything as mellow and beautiful as you remembered. All here, as it had to be to justify your dark odyssey across the empty gulfs, your endurance of the drabness and tedium of strange worlds. A bright-sunshiny afternoon, expanses of green-smelling grass, the wind rich in scents of familiar things. Golden light streaming over streets and buildings. You are here now, and it is still here. So enjoy it.

For contrast, as you walk along, you recall blurred images of space, and life as you lived it on other worlds. Domed cities in small Lunar craters, troglodyte existence in underground workings on Pluto, the sealed honeycomb world inside Callisto, and Ganymede as porous with caverns as dried sponge, the eery glow of eternal twilight on Venus, Mars with its broad and desolate wastes, Mercury where men squeeze into insulated bubbles be-

tween the extremes of heat and cold. Your memories of all these places seem dulled, as if belonging to another lifetime. Recall of those interminable watches in journeying spaceships are clearer, but oddly undetailed, unreal.

Shock does blunt a mind, you explain to yourself. In bad cases, memory often scatters to the winds of space. But time has passed since the accident out there, just how much you don't know. But you know you are recovering; time will do the rest, not prolonged hospitalization.

At first, nothing seems to have changed much. Earth was good to look at, and still is. Breeze feels good on your face. Think of that, and let yourself soak in the mellow pink glow of nostalgia. Real trees and lawns, real homes and stores, a glimpse of bright water one way, distant mountains the other, the moving walkways with their loads of people. Just as it was the day before that morning when you took off for Luna. Nothing has changed nearly as much as you had expected. And a sudden chill of doubt touches you.

Time has passed. Children have grown up, everything should be ten years and more older. Styles in vehicles and clothing fashions have gone through their regular cycle. You had accounted for that. But something has changed—

dreadfully. You stare anxiously about, trying to evaluate the difference, and a vague suspicion grows into certainty. People are not the same as you remembered. Faces about you reflect a wide variety of emotions, the same as you knew, but now you are conscious of the pettiness, the greed, the harried and fretful driving forces which shape their individual lives. And you are appalled by your reaction to this generic ugliness.

Are these the very people who are even now, somewhere, building the starship, to take them out of their own solar system and glut the galaxy with multiplications of their culture, or lack of it? Can such a race, full of its own selfishness and small cruelties, construct a ship capable of making the Big Jump? And you remember your own dreams, how you hoped that the starship would be finished in your time, so that you could have a part in that greatest adventure of all.

Yes, this is the race, and you were part of it. For all their individual insignificance, they have dreamed a great dream. They were building the Starship, and by now may even have it finished, waiting only for its crew to be selected to start that long haul out and out

toward the stars. You shiver a little with excitement, and then ask yourself if you still want a place in that venture, if you are too old or banged-up, or if you still feel that the aims and aspirations of such a people are too pretty for you. A people who could imagine and implement a new principle supposed to evade the barriers of light and space and time, since no atomic-drive spaceship could hope to reach even the nearer stars in the span of a man's life.

You stare about you with new interest, but the faces of your fellows still disturb you. There is more hate and fear and greedy ambition in them than love or simple kindness. Their minds seem tangles of emotional drives, with more confusion than confidence, more of a desperate need to escape from themselves and each other than from their world. They may conquer the stars, but you doubt if they can conquer themselves, their smallness, their pitiful insecurities.

You muse grimly over this new perception in yourself. They have not changed, but you have. You never used to be aware of such things. It is almost as if you could read thoughts and emotions directly, not grope at them through a maze of codes and conventions. You sense a harsh ma-

turity in yourself, and you are almost frightened by it. Partly to reassure yourself, you stop and stare into a shop window with darkness behind it. Not a good mirror, but it will do for a quick check. Hospitals go in for a scarcity of mirrors, and you have not been shaving yourself lately. You want to know if your internal changes are reflected in your face. One quick glance and—

A scream strangles itself in your throat. You take a longer look and try to gulp down the thrill of horror.

A face stares back at you. Not a familiar face. Not quite. Sensitive, with built-in intelligence, liveliness of expression and a streamlined beauty. A suggestion of character, even dignity, a face you might be proud to wear, but without associations. Not your face at all, though there is resemblance to someone you nearly remember.

Stand and grimace, and the stranger matches your facial gymnastics item by item. What has happened to the known, scarred, unlovely badge of your identity? How could the doctors make such a mistake? There must be pictures on file, other data. If they had to rebuild you with plastic surgery, why this face? Far too fresh and youthful for your face. But, like it or not, this is the one

you're wearing. Better get used to it. Better—

Turn and walk away. Fast. Try to forget what has happened. Or try to remember...

DR. VERNEY stared uncomfortably at his colleague. "Why do anything about it?" he asked. "He doesn't know anything about himself, and we don't know much. His tests show a variation from the norm, true. He may have unusual perceptions and even unknown powers, but you can't control the complete experiment in a case like this. We did our best. Now we can only wait. We don't even know that he is dangerous."

"We can't wait to find out. I'll admit Armstrong seems all right. But so did the others—until they ran amok and caused so much damage they had to be killed. One set fires merely by thinking about them. Another looked at people and wished they would drop dead, so they did. We were lucky that neither one got out of the hospital alive. But Armstrong is outside and potentially dangerous. More than the others, because he shows his difference less. He may be the man of the future, but the present is not ready for him. The risk is too great."

"What risk? The others were failures. Armstrong is the first success. He doesn't even guess about himself, and he won't if he's left alone.

Not ten people in the world know about him."

"He'll find out," Dr. Sentar said bluntly. "And so will the public. When that happens, they'll hound him, and he'll react. We can't be sentimental. Notify the police. He's different enough to stand out. They'll find him and—"

"And that will only start trouble sooner. It's not as if he were a criminal, or had some contagious disease. He hasn't done anything, and we don't know that he will. What bothers me is that he walked out of here, unchallenged. As if skipping his bill. Why would he do that? And where would he go?"

"You're sure you told him ...nothing?"

Dr. Verney frowned. "What could I tell him. Anyhow, I never worked up the nerve to try. Now I know how God must have felt if he ever tried to explain himself to Adam. Embarrassment is the least of it. The rest is worse."

"Only one thing to do," insisted Dr. Sentar. "Notify the police. Send out a general alarm and pickup order."

"On what charge? Armstrong's no criminal. I'm not so sure about us. A Guinea pig has some rights."

"So have we. So has society. We have the right to go on stumbling and fumbling through the universe in search of our private destiny.

No individual, superman or demigod or demidevil, has any right to interrupt that search. We did a good job on Armstrong, but successful or not, he's the first and last of his kind."

Dr. Verney shuddered. "You talk as if he were some kind of robot or monster. He's just a man, maybe not *exactly* like us, but very close. He came from the same source. He's not even anything completely new. Every phase of the operation is standard practice. We've grown new brains for the diseased, or the criminally insane. We've grown spare parts in vats to replace damaged organs and limbs, using the original cells as seed. God must have meant for such processes to be possible, since he placed complete blueprints for the whole organism in each cell. Armstrong is a masterpiece, and a scientific miracle, not a horror created out of spells."

"True, Armstrong's a miracle," grudging Dr. Sentar. "But I doubt if anyone really likes miracles. Certainly not the public. We don't trust them ourselves, because we know we can't. Any real miracle is beyond scientific control. By definition. So we don't know, any more than Armstrong does, what we've created in him. And I'm not sure I want to know. I doubt if he'll like us. I wonder if he'll like...ordinary people."

Dr. Verney shook his head stubbornly. "I'm as frightened for Armstrong as I am of him. A thousand years ago, we'd have hung a bell around his neck—a Lazarus Bell—and released him into the world to wander like a leper or living dead man. We'd have made him shout 'Unclean, unclean!' wherever he went, to warn away the frightened, the curious, the ignorant. Nowadays, in 2196, we imagine we're more civilized. We know only that he's different, and that the human wolfpacks hate any difference. So we let him walk out of here, unwarned, into an unwarned world. He's the first completely regrown man, created in laboratory vats to his own specifications, from his own salvaged cells. Is he to blame if we did a better job than his natural environment?"

"Nobody's blaming anyone," said Dr. Sentar. "The question is not when we notify the police, but how?"

"If we tell them the truth, they can think up a charge. But we'll have to temper the facts a little if we want him brought back alive."

"I'm not sure that's what I want," admitted Dr. Sentar soberly. "I'm not really civilized myself. What happens when he presents his bill to us? Can we pay it?"

"Maybe they'll never catch him." Dr. Verney sounded almost hopeful...

IN A CITY of unfamiliar, and unimpressive faces, you hurry along, glancing uneasily about. Like a paranoid, you imagine people staring after you, distrustful, talking about you, possibly threatening you. But everyone is too intent upon his own shabby affairs even to notice you.

You have changed, and your environment has changed. All the elements are there, but subtly altered, like that face which is not quite your own. Some demon has tapped the giant's kaleidoscope that is the world, and all the bits of colored glass have rearranged their snowflake patterns within the mirrors.

Your name, you think, is Armstrong, but you are no longer sure even of that. Surely someone can tell you about yourself and help you explain to yourself what has happened. Armstrong must have had one friend, one enduring relationship, something or someone solid and unalterable in the midst of chaos. You feel as if the stage-setting of your world has shifted, but the cast of characters must be the same. Not everyone you knew, you or that other Armstrong, could have died or vanished in a mere ten years.

Dip into your memory and you will think of someone. A relative, or just a friend. You feel like a stranger trying to

shake loose coins of memory from your own piggy bank, but you persist. Fuzzy and indistinct at first, your recollections slowly become clear.

There was such a friend. Just the sort to remain himself in all possible situations. Whether your friend, or Armstrong's, he was a character. Probably he will be at home, living his oddly leisurely life as always, surrounded by comforts and the small luxuries which were his necessities. He will have his feet on the table, his head in the clouds, beer or mixed drinks beside him and his collection of artistic grotesquerie around him. He will be listening to Bach or Beethoven or the Modern Martian composers and contemplating life from the pinnacle of his isolation from it.

All this, he will eagerly share with you, or even his silence, understanding and listening power.

Greggi, of course...

BEFORE Armstrong reached Greggi's, several things happened to him.

First, the police visicast. A street-intersection screen and speaker was blating out his name and description. There was a picture, too, but he was too far away to see the image clearly. It was a general alarm and pickup order. Not expecting such a weird development, Armstrong had trouble associating the visicast with himself. He missed

most of the 'cast, but he heard enough to send him slinking away from the street corner like any other fugitive.

Others heard the broadcast, too. A woman stopped and stared blankly, her mouth falling open. Then, as if breaking from a trance, she darted into the nearest doorway. A man, catching sight of Armstrong, behaved in much the same fashion.

Walking quickly on, Armstrong grew both uneasy and self-conscious. Confusion reigned in his mind. True, he had left the hospital without formalities, but only to go for a short walk, on impulse, intending to check back for the night. Now, he was a hunted fugitive. Not a criminal, he knew. He had heard too little of the broadcast to learn his offense. But the name was his, and so far as he knew, his description. From results, the latter must be painfully accurate. Instinct of the hunted took him into back streets and deserted alleyways.

Briefly, he wondered about Greggi, but memory reassured him. Even in a mad world, such as this one had suddenly become, Greggi would always react sanely. He would do better than that. He was a good friend, and would help.

Outside Greggi's apartment, Armstrong hesitated, wary of a pushbell which would acti-

vate hidden scanners to flash an image of himself inside. Such a device might also make a recording or touch off an alarm. If a man could be hunted like a mad dog merely for walking out of a hospital, who could guess what further police invasions of privacy might have taken place? A knock would summon Gregg without touching off any possible hazards.

As Armstrong's knuckles brushed the door, it sprang in violently. Hands reached out and dragged him inside, then the door shut like a trap, its lock clicking solidly.

"I hoped you'd come here," Gregg explained. "When I heard the visicast, I stayed handy, waiting."

Armstrong studied his friend eagerly. Gregg, at least, looked the same. Sounded like himself. Always a little odd and unpredictable. A little greyer, perhaps, but still the owlish self Armstrong remembered. Goggly glasses, too heavily tinted for indoors. A general dusty-featherish quality about him. Thin, wiry but strong, nervous but self-contained.

"I had to come to you, Gregg," Armstrong said, his voice close to panic. "There was no one else. I'm alone, confused, and frightened. Possibly I'm going crazy. Everything's changed, or I have. What's going on?"

"Don't you know?" demanded Gregg.

"I didn't catch the whole visicast. I don't even know what I'm supposed to have done. It's all a mistake."

"Yes," agreed Gregg easily. "It was a mistake. But it's nothing you've done. The damage was done to you. I suspected something like this when they wouldn't let me see you at the hospital. One look at you, and I know I was right."

"Then you do know what's wrong?"

Gregg shrugged. "I don't know anything. But I can make an educated guess. So can you, if you'll stop and think about it. How's your memory? Not just recent events, but the past?"

Armstrong closed his eyes, thinking hard. "Vague. Most of the patterns, but no details. A feeling of unreality. Also, I felt uneasy even before the visicast. When I looked at myself in a store window, a stranger looked back at me. Am I crazy, or what?"

"Mostly or what. You're sane enough, I think. You've changed, in ways you don't even know yet. And you may as well face the fact that things are going to be rough, whatever you do or don't do. It's what you may do that worries the doctors and the public. How bad it has to be is largely up to you. Wait till you do something that really jars them, and you'll see what I mean."

"Don't play games with me, Gregg. I can't stand much more at the moment. Tell me in plain words what's wrong. Maybe it's not too late to straighten everything out."

Gregg maneuvered a pair of strong drinks from his robot bar-butler and handed Armstrong one.

"One won't make you any fuzzier than you are now. And you may need it. Medicinal, of course."

Armstrong took the drink, but balanced it as cautiously as if it might explode in his hand.

"The whole trouble," Gregg went on calmly, "is that you are not the same man I used to know. You're not the Armstrong, my friend, who went off into space in search of something which never really exists anywhere. In the accepted use of the term, you're not really a man at all. Not like the rest of them. Sometime between your accident and now, you reluctantly resigned from the human race."

"That's plain enough, but I don't understand. Do you mean that I'm dead?"

"Not dead, but you will be quickly enough if you wander around the streets. Harboring a fugitive from the police is a dangerous game. I'm doing it partly for old time's sake, and partly to convince you that I'm your friend. I'm Armstrong's old

friend, or your new one, whichever you like, but you're not the old Armstrong. I'm hoping you'll trust me and let me help."

"I came here," said Armstrong dubiously.

"How well do you remember the crash?"

"Not at all, except what they told me. Everyone asked that same question. They showed me the film-tapes and told me all the details, then I thought I remembered. Now, I'm less sure."

"You couldn't remember. Have you ever heard of anyone living through a crash like that?"

"I wondered about that. Nobody could have survived as they told me I did. But I'm walking around, talking—"

"So they scraped up the pulped and charcoal-broiled hunks of Armstrong, brought them back in a deep-space version of vacuum deep-freeze, and rebuilt the wreckage."

"Nobody ever restored life to a corpse like that."

"Nobody ever did before. There are nasty hints about a couple of experiments that went sour. Nightmare fables, which nobody believes, and which wouldn't count anyhow. You were just organic wreckage chiselled from a tin-can spaceship which blew inside out and burned while its oxygen lasted. Starting from that was like starting

from scratch. But we know that's what they did, because that's what they must have done. You're a laboratory-type scientific ghost."

"It makes a horrible kind of sense," admitted Armstrong, shuddering. "And makes me some kind of monster."

"Not that, unless you were before. Maybe they left out some ingredients, or put some in which frighten them. Actually, though, I think you're just the man any human might have become if given a decent chance. You're brand-new, a practically mint adult, not battered and warped from birth like the rest. By the time any average human reaches maturity, he's too tired, or bitter, or angry to care about anything. Most people use only a tenth of their potential brain-power, largely because they are afraid, or because education channels them into a rut."

"You're guessing about a lot of things. I don't feel bright and new. And confused as I am, I have memories. Even a sense of my own identity. Would I have either?"

Greggi laughed cynically. "Identity comes with the original package. You couldn't escape that. The memories are Armstrong's, or somebody's idea of what he should have. But they are synthetic, dumped into your empty brain while you slept. Have

you never heard of hypno-tapes? Your brain was picked clean when you took your tests for spacepilot. They've patched together a mind-montage from your own tapes and the record files. Even your memory of me is false. Partly Armstrong's, and partly the fact that I signed your references. Synthetic memories won't hold, of course, since there are no emotional scars for traction. I'll bet your clinically sterile brain made a hash of sorting those ideas and memories into the right pigeon-holes."

Armstrong sighed wearily. "It's a file cabinet kept by an idiot. Every drivelly thought you can imagine. Ghosts of people and places. There's one persistent, uncomfortable ghost of a girl that I wish they'd left out. I remember vaguely that I never asked her to wait, since a spaceman has no future to offer. But I feel guilt, and a terrible sense of loss. Was Janet real, Greggi, and if she was as wonderful as I thought, how could I ever have left her to go into space?"

Greggi's lips twisted wryly. "A lot of us wondered about that. Janet was as real and wonderful as you remember. She still is, but it takes a man in love to see all the wonder in a woman. You'll see her, but it will be better for everyone to remember that you're not the Armstrong she knew."

"Ten years is a long time. I'll remember, Gregg. She didn't wait, did she?"

"Ten years is a long time. She didn't wait. Janet and I were married...about five years ago."

Silence lengthened and deepened between them. Armstrong broke the strain. "I suppose it's a little late for congratulations."

"A little. But we're both happy you're back, even if you're not the Armstrong we knew. That makes a difference. She will know that better than I do."

Armstrong laughed. "Things get complicated in ten years, I imagine. You still want to help me?"

"You're still my friend. And I would for Janet's sake, if you weren't. You'll need both of us. But you may not like the kind of help we offer."

"Offer it and see. I'm grateful, Gregg. You don't think my coming back will make a difficulty between you and Janet. I won't see her, except on your terms. Actually, I'm relieved about her."

Gregg chuckled good-naturedly. "It might be awkward for you, not for us. And don't breathe too deeply with relief. Janet has a younger sister you may not remember, if you ever noticed her. Petey improved a lot in growing up. While I'm not matchmaking, she's more

your type. But we'll get around to that later. Right now, we'll have to get you away from here, and fast. This is the second place they'll look for you."

"The second? What's first?"

"The starship," said Gregg. "Don't forget they've picked your brains for their records. And you've always had one thing at the top of your mind. They know the starship would attract you, and once they start thinking things out, they'll go there."

"I might have gone there if I'd thought—"

"Better start thinking. You might come up with something interesting."

"The starship sounds like a poor place to hide."

"It would be. But we're going there just the same. Not to hide you. To steal it and escape."

"That sounds insane. Is it finished? I wondered."

"Finished enough for us. Not for them. It has never been tested, and no crew is trained to operate it. But I think we'll manage, between us."

Armstrong shook his head violently. "Even if we could, where could we go?"

"Let me worry about that, for now. Time is short; I'll explain as we go. But take my word for it, we have to go there, and we must steal the ship."

"If they're looking for me there, won't they still—"

"No need. It's heavily guarded, by robots and booby traps. If you went there, you'd have to break in and set off alarms. They'll figure you know what a trap it is, and are staying away. Then they'll come here."

It was true that his mind was not operating at top efficiency, but Armstrong's mind was operating. It was beginning to stir into life, observing, analyzing, classifying, dealing with assorted facts, projecting them to various possibilities logically, of possibly with some process faster and more accurate than logic. Events were moving almost too rapidly to have meaning, but his brain was accelerating, slowly catching up.

Greggi seemed to be a friend, but actually he was a stranger. If sincere in his offer of help, he could get into serious trouble helping a fugitive escape the police. And if not sincere—

"I can't let you help me, Greggi," said Armstrong. "By coming here, I've already put you out on a limb. Any more is too much to ask."

Greggi paused, grunting. "Let me do the worrying. You go down and make sure the street is clear outfront. I'll try the back. If the buzzards are gathering, come back up here. If not, I'll decide which way is safest.

Stay put and out of sight until I come for you."

Because Greggi was an oddly dominating personality, Armstrong followed orders. But a core of corrosive worry started eating at his mind. With a general manhunt in progress, the pair of them would stand as much chance of getting through the streets and out of the city as an ice cube on Sunside Mercury.

From the sheltering doorway, Armstrong watched the street outside. He waited. Then suddenly the area was swarming with uniformed men. A police vehicle moved into position blocking the nearby alley. Others closed off the street both ways. Like smoothest clockwork the manhunt machine functioned.

Then Greggi touched his shoulder and drew him back inside.

"I must have underestimated them by about six minutes," he whispered calmly. "We're sewed up, front and back. Let's try the roof."

Quickly Greggi led the way through a maze of corridors, shoving Armstrong into a service elevator.

"We'll be trapped up there," argued Armstrong. "I don't think my newly acquired faculties include levitation. And don't tell me you can fly."

"Anybody can fly with the proper tools."

"You mean there's a hell-

copter up top we can steal."

"Not that I know of."

"So you just wave your hand—so!—like an amateur magician?"

"I'll try waving my hands and see what happens," said Gregg, grinning.

From the roof, they cautiously looked down upon the army of encircling police. The building was besieged.

"Keep your head down," counseled Gregg. "Cops nowadays are trigger-happy at best. If you try to resist, or keep running, that's it, brother. To stay alive, you give up quickly, and present your fat head on a platter."

"That might be the best thing, all round. I don't want you in trouble for harboring and helping me. Maybe I should call down to them and surrender."

"Try it, if you feel lucky. Stick your head over that parapet and they'll blow it off."

"Why would they do that?"

"Ever see kids pick on the one that's different from the rest of them. Just being different is enough. And if people are scared enough, they don't wait to find out if there's reason to be scared. You're a wanted man. And if you are taken, they won't know what to do with you. If you're dead, it's simpler, and no arguments."

"Don't you want me to turn myself in?"

Gregg shrugged. "I'm not making your decisions. Suit yourself. But I hate waste. Who ever asks what happens to Guinea pigs?"

"I'm just curious enough to find out," Armstrong told him. He stepped to the edge and shouted to attract attention. He got it. Heads turned up. Guns followed. Splintered stone sprayed his face, cutting savagely. A slug whined into infinity. Armstrong ducked.

"I guess I thought you were exaggerating," he muttered.

Gregg nodded soberly. "That settles that. I wish you were superman. Now I'll have to work the miracle." He broke off, staring into the sun glare. Standing up, carefully out of sight from the street, he started wigwagging frantically. A 'copter moved out of the dazzle, hovered and started to slant down toward a cleared parking area. "Help me signal them," ordered Gregg.

There was a good big stage and strong lighting for the magic show. And the occupants of the 'copter were not blinded by sun glare. Both men waved and danced like maniacs.

"The kids were supposed to pick us up at the parking lot," Gregg shouted jerkily. "But I cut it too fine. Now, if they don't spot us up here, we're all in trouble—"

The aircraft had seemed to

hesitate. Now it was rising again. It hovered, then started a long sweep toward the roof. The hail of police bullets stopped momentarily, then redoubled. Still the copter settled slowly. Gregg waved Armstrong toward it, and the pair swarmed up the dangling rope. Armstrong almost lost his hold and fell back to the roof when he made out the 'copter's occupants.

"You said kids," he accused angrily.

"Sure. Janet. And Petey, her kid sister." Gregg was red-faced and panting.

"I was bad enough involving you. I won't get them fouled up in my affairs."

"Nobody's involving anybody," Janet said quickly. "Get secure, you two. You're rocking the boat. It's too late for argument, even if you knew what you're talking about. We're thrill chasers, or we wouldn't be here."

As the 'copter shot upward, Armstrong felt embarrassment flood hotly through him. Janet spared him a quizzical sideways glance. He stared grimly at her and Petey, but any memory of either slid away from his touch like a droplet of mercury. Both were strangers. Smiling strangers who were risking a lot for him. Too much.

Outreaching the bullets, the copter rose swiftly and flung away toward screen-

clouds, overhead and far distant.

"Well be all right now if we can fuzzle the sky patrol," said Gregg.

Always one more hazard, mused Armstrong. Life was like that. You faced them one at a time, but you never came to the end of the obstacle course. Not alive. You accepted hazards when they were part of the life you had chosen. In space, hair-raising incidents were daily routine. But, as in baseball, you expected to be safe at home. If you had a home...

Incubator man. Worse than being an incubator baby, you had been incubated all the way. You were completely orphaned, with not even a world you had been born into. No wonder you felt like Satan in Paradise. You are a stranger. A stranger everywhere.

Janet was staring at him. She beckoned him close as she sat primly at the controls.

"We'll both feel less awkward if we remember that we've never met," she told him warmly. "It's as if the man I knew had died out there, and you are his younger brother. So I'm happy to meet you, sincerely."

"Nice person," thought Armstrong, yielding Gregg a brief twinge of jealousy, and wondering how his other self would have felt at finding her married to someone else.

"I'd be happier under other

circumstances," he growled. "You seem to know all about me."

"More than you know yourself, apparently."

"I appreciate your interest, but you've all gone far enough. Set down at the first opportunity, and I'll get out of your lives. Suppose you do help me escape, to the starship, or elsewhere. I'll only be buying a little time, and you people are paying too high a price for that. Sooner or later, I'll be caught, or give myself up. All I need do is get past the police to someone in real authority."

"Then what?" asked Petey.

"I don't know," Armstrong answered stubbornly. "But I won't find out by running away. If I'm different, I'll have to adjust myself to it. Perhaps the doctors can help someone, and surely the world will give me a chance to prove myself."

"Perhaps you'd better tell him about us," said Janet.

Greggi's face was sober as he spoke. "I said you might not like the help we could offer you. I'm not stealing a starship merely to rescue you. I'm going home. Did you think you were the only one different on Earth? You've always sensed that I was different, but you never guessed how different. I'm an alien."

"You, Greggi?" Somehow the thought did not surprise Armstrong as much as he felt it should. But he frowned,

puzzled, glancing at the two women. "How about them?"

"Ordinary Earthfolk. Contact with me has changed some of their ideas, that's all. Don't worry about miscegenation—basically the stocks are identical. We're human, too. A race like yours, except that our environment gives us a better chance. We live longer. I could spare twenty years on Earth as a student observer as easily as you spend a year in study."

"I always thought you seemed oddly mature, civilized in a way most people are not. You have a talent for leisure."

Greggi laughed. "By our standards, I will not be really mature for a hundred years. The difference in life span is chiefly a matter of sunlight. Your sun is the source of all life and power, except possibly atomic. But its very radiation erodes your bodies and minds, ages you too rapidly. With you, a life span of a hundred years is rare. With us, one of a thousand is not. Thus we can live more leisurely and gracious lives, there is time to develop naturally. In a sense we are supermen, but not beings with weird and supernatural powers. We are too lazy to develop any mental or mechanical gadgetry to force each other, or force nature. We live simply. Wider ranges of perception in smell and sight and hearing, greater

delicacy of touch and taste. No more."

"You're not joking?"

"Never more serious. We run some danger in studying on Earth, for people under such time-pressure are always dangerous—and there is the solar radiation, which must be avoided so far as possible. We study Earth-life as an aid to understanding ourselves. Much as a scientist studies the briefer life-spans of insects under a microscope. Only the passage of generations make a true study of genetics possible."

"Bugs under a microscope! Is that what you think of us?"

"Of course not," responded Gregg irritably. "We respect you as we respect ourselves. Would I have married Janet if we felt contempt for her people? She knew all about me first, and when I told her and Petey something of my world, they decided to come along with me when my term expired. Such marriages are not rare, though there is always difficulty of adjustment for the Earth-partner. We knew the risks, and wanted to take them."

"Where do I fit into this?"

"We're asking you to come along. For you, with your body practically unexposed to sunlight, and a mind untrammelled by false knowledge and ruts of thinking, there will be less danger, and no trouble in adjustment.

And no organized manhunt to face."

"That, at least, is attractive," admitted Armstrong. "I am not so sure about the rest. I don't feel like superman, and I'm not sure I'd be comfortable in your world."

"You're not a superman—yet. When you get rid of those indigestible ideas and false memories force-pumped into your brain, you may learn to be one. Most education here is equally bad. It is usually nationalistic or economical propaganda disguised as history, a few incomplete and unsatisfying philosophies, and some paradoxical formulae in mathematics. My world is no dull Utopia, which would be the ultimate boredom if possible, but a place of constantly expanding horizons. The bigger the men, the bigger the problems. Life is never easy, and never complete."

"You sound like a missionary. But if I can't adjust here as a kind of alien, how could I adjust in an alien world."

"The difference is that you would be let alone, helped if you asked for help. We would try to make it easy for you."

"Thanks, but no thanks. I think I'll try it the hard way—here."

Gregg shrugged. "Suit yourself. We'll never force you or try persuasion. We never interfere on Earth, if it can be helped. An occasional rescue, in extreme cas-

es, when a person seems hopelessly out of place in this environment. We never force people, and never kill, even to protect ourselves. We'll have to land soon, separate, and each make our way to the starship, alone and on foot. In this 'copter we would be traced too quickly. If you change your mind, join us at the starship. We'll wait for you as long as we dare."

"Don't wait too long. I'm not coming. Do you always steal a spaceship to go home?"

"There are other ways, sometimes more adventurous, and always less comfortable. But our experts wished to study this ship for some interesting possibilities in its drive. One can learn from any culture. However, we only borrow the lovely toy, and my replacement will return it, almost before it is missed. We function on a different rate of time flow. Does that solve your tender conscience?"

"Somewhat. I suppose you think I'm a fool for wanting to stay here. Perhaps I have some idea of helping people, though I don't know what I can do for anyone. The roots I have here may be synthetic, as you say, but I would feel like a deserter, just running away from something I don't understand."

"I sympathize with your feelings," said Gregg sadly, "but you're lying to yourself about your situation. You

think the right word in the right place will solve your difficulties. It's never as simple as that. Humanity will never accept you, except as a freak, potentially dangerous. Nobody will trust you, even if you want to help. They won't wait for you to become a menace. They are too frightened, too insecure. They will hate and envy you for any extra abilities you have."

"They already seem to hate me."

"It was war between you and them from the moment you came into being. To survive, you will have to master them, and no slave ever loves a master."

Amstrong was thoughtful but unconvinced. "You say you never kill, even to save yourselves. Doesn't that mean rough usage here?"

"Sometimes. But we feel about their violence as you might about obstreperous eight-year olds. They can hurt, but you forgive."

"I'm not sure I could, always. But then I'm an obstreperous eight-year old myself. And maybe I'm the yeast needed to stir this batch and raise it to the ten-year old plateau. I know this world, its ugliness, its dreariness, its cruelties and frustrations. At worst, I know what I'm fighting. If I don't like this world as it is, I'll try to help change it."

"Well, good luck. The door

is open, but the decision is yours. The starship is guarded by electrified fences and gates which open to coded electrical charges on metallic ident-cards. The girls have tags, since they worked on the ship, and can get through all right. I can manage, somehow. And so can you if you come."

"Don't worry about it."

Janet was landing the 'copter. She threw the ship at the ground, fast and hard. A small clearing in a patch of woods came up, expanding like an elastic miniature. They struck with a jar. Petey busied herself assembling some oddments of luggage and Armstrong wondered how anyone, a woman particularly, could leave a world and take so little of it along. As he remembered women—

He hauled up the thought shortly. Actually, his memories were second-hand synthetics drilled into his subconscious by the hypnotic machines.

As Armstrong helped Petey, handing the burdens from the 'copter to Janet on the ground, neither woman would meet his eyes. He seemed to feel into their minds and emotions, sensing both warmth and curious disappointment. This momentary telepathy startled him. Was this some new faculty, incompletely functioning? He felt oddly disconcerted by this reaching out to minds

and emotions. Almost embarrassed.

"If they catch me, I'll try to foul up their hunt with some lie about you three," promised Armstrong. "Maybe somehow, I can lead them off your trail first."

As if conscious of his invasion of her privacy, Petey stared at Armstrong from veiled eyes, and her mind clamped down suddenly blank. Janet's lips tightened, but she said nothing.

The group scattered quickly. At the edge of trees, the girls hesitated long enough to wave back, and call, "Good luck!"

Greggi scorned conventional goodbyes, except to clasp Armstrong's wrist roughly. They parted....

NOW you are alone again. Alone, in a worldful of strangers, even though it is your own world. You miss Greggi. Alien or not, he is your one friend in any world. With the girls, by definition your own kind, you felt less sure of yourself. And with everyone else in this world, you are definitely at odds—through a fantastic twist of circumstance.

Your mind is made up. Lead off the pursuit. Give Janet and Petey and Greggi their chance, as they gave you yours.

Perhaps you have no right to connive at the theft of the starship. As a spaceman, you understand the dream behind

symbol. But this is no time for doubts or divided loyalties. Right now, you are Satan in Paradise, or an unfrocked angel in Hell. You owe something to the few friends you have. The landing copter will have drawn attention to the woodlands and the clearing. You linger by the ship to give the others a chance to clear. Then set fire to the 'copter. That will be a beacon to light the hunters to you.

Not that you expect them to believe the 'copter crashed and burned. That would be too simple. They will examine the wreck and find no bodies. Then the hunt will be on. A real manhunt now. No paper chase. No paper trail.

Wild sunset hangs low in the sky. Twilight follows quickly as clouds smudge and glow rose-grey, then darken. The column of oily smoke rises skyward, fire-tinted with dancing reflections. From sheltering trees, you watch the burning. You wait, ears tuned for the slightest sound. Your mind tries to reach out, and you feel a stir in you of senses beyond the familiar five. You first become aware of shadowy figures stalking among the trees. Manhunters, who know their business. Armed and ready, they move in methodically. Tensed, trigger-happy, for man is the most dangerous of big game.

You slip silently among them, through their lines,

your newly enhanced senses giving you real advantage in the gathering dusk.

Now, rout them out, stir them up. Give that careless one a tumble into the brush. Start running, noisily, and make it good. Bright lines of fire interlace the darkness. For the moment, they are confused, shooting at shadows. Run. Now that they have the scent, the chase is hot. Keep moving, keep low, give them a moving target, or none. These are trained marksmen.

The hunt continues, and you begin to enjoy its exhilaration. You know how a hunted animal feels. Excitement balances fear. Now brush crackles close by. Somebody gives crisp orders, and confusion becomes pattern. Systematically they comb the brush, spreading out through the patch of woodland, heedless of noise, like beaters driving game before them. You are their quarry, but you are no frightened game. You watch, skulk, listen, move on, outguessing them.

Woodcraft is an art nobody thought to include in your synthetic education. But you learn quickly, or the race memory is buried deep within the cells from which you were remade. You are not superman, perhaps. Nor even superbeast. But survival skill comes naturally to a savage, and all hunted men become

savages as instinct takes over. You are a savage against a world.

They group, fan out and regroup. They consult. They try tricks, and you counter their tricks with yours. This is a grim game, but make it a good one while it lasts. Nothing can go on forever. Not one against so many. That thought suggests another, grimmer. Nobody can civilize a world. Inertia is too great. Your boast of helping to make over the world was a finger held against the wind. The few who have tried always ended on a gallows, at the stake, crucified, shot, or merely ignored to death. Break the pattern and the pattern breaks you. The race goes on its own way, out of sheer momentum, rolls over you and you are forgotten. They like their world and want no part of one you might want for them. So you have no holdings in theirs.

Suddenly the forest is quiet. Too quiet. Too suddenly. They have stopped, waiting. You suspect another trick. You stop, listening, waiting, wondering.

Off in the denser underbrush a tiny animal is caught by something. Its body threshes wildly. The whimper comes faintly even to your superhearing. But you picture clearly every detail of the small tragedy. Panic is implied in the very desperation of the sounds. Your

mind reaches out to sense that panic, the pain, the awareness of its tiny self, and the torture of the trap which holds it. Empathy between you and the tiny forest-dweller is strong. You long to approach the beast, to comfort it and end its sufferings if the injuries are beyond help.

But caution holds you frozen. Is this but bait upon the larger trap society has set for you. Applied psychology, they call such tricks, and you know that the subterfuge is not beyond them.

You know the hunters are all about you, silent, waiting. They hope this incident will throw you off guard, bring you into the open.

But the panic and pain of the beast is real. You can go to its succor, or you can walk away, escape the larger trap. Pity is always a trap of one kind or another. Though no longer blinded by pity, you cannot leave the beast to a lingering pain-filled death. Not to save yourself. Not for any reason.

Belly-down, worm-crawling, you inch toward the thicket. Instinct and your new awareness gets you through the ring of concealed men. Unseen, unheard, you work closer. A rabbit is torn, bleeding, terrified, cruelly held. With you night-vision in a spectrum of curious reds, you see clearly. Large, luminous eyes watch you, fascinated, pleading. As you feared,

the beast is past help, needs only swift mercy. With a quick blow, you close the tragedy.

Silence slaps down in the brake. Silence louder than sound. By its dying, the rabbit has betrayed you. Your enemies spring toward you, closing their trap. Flashlights weave a pattern of beams, but only enhance the darkness. Hunters grope blindly, guns ready.

On your feet, you are running. Your rush finds a hole in the circle, and by sheer surprise you break through.

The chase becomes a race. In close order. Perilously close. Someone is practically on your heels. Brush tangles your feet, branches slash your face, breath burns hard in throat. Run hard to string them out. Then strike back at them, one at a time.

Prolong it, if you can. Your ears sort out the sounds behind. One still crashes close. He must be a woodsman, a runner. You are not. But the rest have fallen back, far enough possibly to give you time to deal with this one. You turn and hurl yourself at him. Locked together, the pair of you roll and thresh in the rough brush. Hammering with fists, you give and take punishment. His hate and fear and savage bloodlust strikes at your sensitive mind like a physical blow.

You break apart, both scrambling to your feet. He

stands swaying, dragging out a handgun. Dark-blinded, he stares, trying to aim. You kick out, surely. As the gun spins upward, you catch it from the air. Your mind touches his. Sickened, you retch. There is deeper ugliness beyond the surface motivations. He wants to kill you not only because of his orders or his fear and hatred, but also because he will enjoy killing. Your mind thrust out among the others searching for you. You find the same hideous thought and emotion in all of them. They kill because they like it.

Your adversary cannot see that you have the gun. He gropes toward you, eyes blank. He is dangerous, because he can delay you, can call the others to you. Already you can hear the trampling of many boots, feel the ugly minds closing in. He cries out to guide them. Then, kill-crazy, he leaps.

Gun ready, aimed, enemies circling you, one charging at close range, for you this is a moment of decision.

Your finger tightens on the trigger....

LATER, standing in the moonlight, you look up at the great ship. Mirror-bright, it stands as a symbol of man's eternal challenge to the infinite, a promise for the long-distant future when man has learned how to live with himself and others. Still ground-

ed, man is aimed at the stars. But you will not be with him on that great adventure. Your adventure is now.

Pain and nostalgic sadness twisting inside you, start up the ramp. Inside, Janet and Petey and Gregg are waiting for you. With them, you are not a stranger and alone—anywhere. Gregg is standing just within the airlock. You let him help you inside.

Abruptly the ship takes off, strangely and silently riding a beam of light skyward. Thoughts and emotions spinning, you are dimly aware of the ship, the people, the way ahead.

"You're hurt," Petey cries, moving toward you. Something warm and sweet and glowing emanates from her, enfolds you. You are comforted to realize that telepathy, within limits, may not be too bad a sense.

"Glad you made it," says Gregg. "I had given you up. The girls hadn't. What happened to your idea of sacrificing yourself to reform the world?"

"They caught me in the forest. It was not what they tried to do to me, but what

they made me want to do to them. I couldn't—but I couldn't stay here without wanting to hurt them. And if I could make over the world, I haven't the right. Nothing I could give them would make up their loss if I took away the privilege of working out their own destiny. They're not my people. It's not my world."

"They'll be a great race—someday," predicts Gregg.

"They will—if they learn how to be kind," you agree, with reservations.

"Have you learned?"

You shudder. "I don't know. I hope so. What's your world like, Gregg. Will I fit there?"

"That's up to you. You'll get along all right with the supermen. They're easy-going, good-natured, good fun. Anyone can get along with supermen. But I think you'll be glad Petey came along."

"Petey! Why?" you ask, nakedly aware of her nearness, disturbed by your own emotions.

Gregg hesitates, grinning. "I speak from experience—you can get very tired of superwomen...."



continents in space

by IVAN T. SANDERSON

If the UFO are not alive, or machines, are they actually specimens of the flotsam and jetsam existing in the sky?

IN PREVIOUS articles we have considered first, whether there are valid reasons for believing that the objects now called Ufos actually exist and, secondly, what they might be. We then enquired more deeply into two possibilities. One was that some of them might be life-forms indigenous to our upper atmosphere or to space itself—not “gaseous vertebrates” as one Jaques Loeb of Chicago University recently put it, (see below).

The other was that some of them could be machines constructed by intelligent beings indigenous to planets going round other suns or to other heavenly bodies. A third possibility was also touched upon but more briefly. This was the possibility that some of them might be very advanced, secret aeroforms constructed by earth-governments. This will have to be more thoroughly explored some day, but it really is an intelligence or counter-espionage matter and not a proper part of Ufology.

This leaves us with our fourth original suggestion—to wit, that some Ufos are ma-

Ivan T. Sanderson raises some startling possibilities as to what the UFO may actually be in the present article, the fourth of a series written specially for this magazine by the distinguished scientist, author of the recent MONKEY KINGDOM (Hanover House \$6.95) and other books.

terial objects or immaterial phenomena of a natural order but not themselves animate or piloted by animate creatures: that they are, in fact, what I choose to call "Assorted Junk." This calls for careful consideration, but it entails a procedure that will lead us into other related fields of a most advanced unpleasantness, and will probably get us into a lot of trouble. But, before we proceed to so advance, let me try to emphasize one other point.

It appears we have not yet made clear that it is our strong personal belief that Ufos have a most complicated taxonomy—*i.e.* that they are of enormous variety, and even possibly comprise many types of all of our four basic categories. In other words, we do not for a moment intend to imply that any one of these four suggestions could explain *all* Ufos. Further, we would like to put on record that we believe there are a heck of a lot of other possibilities not covered even by these famous four. We have an eight-page, single-spaced list of such, carefully classified and sub-divided. Perhaps I can persuade our Editor to run this list in the back of the magazine sometime: it makes rather startling reading and somewhat alarms many people who are willing to give it serious consideration. But this, again, is really another subject.

Though we are inclined to believe that the Russians may have some excessively high-speed, lenticular-shaped, plane-like devices, and while it is obvious that neither our Government, nor those of other countries are exactly standing still in aeronautics, I don't personally believe that many of the true Ufos—or unidentifiable flying objects—can be attributed to this category. A certain percentage of *Ifos*—objects that can be or have been identified by experts, such as planes, migrating geese, weather balloons, *et alia*—may well be, but, of course, we wouldn't know about that.

Similarly, while we have yet to hear of any single valid—on the grounds of currently accepted scientific belief and/or logic—argument *against* the possibility of there being intelligences elsewhere than on this earth, in the Universe, the suggestion that even a small percentage of Ufos are "ships" or at least machines made by these beings and possibly piloted by them, does not appear to be very acceptable. The idea is a nice one and it excites all manner of predisposed believers, and even spurs on some of the sanest and most cautious enquirers, but it presents some extremely "difficult" aspects. Notable among these are the following.

First, why don't they land?

Second, if they do, why is not the fact universally known or at least accepted? If they do land so secretly that nobody knows about them, how is it done; and, again, why? There are those who would have us believe that all sorts of beings showing intelligence and ranging in form from ski-suited blondes of divine countenance to little aluminum beings with four fingers and bat-ears do land on our earth all the time. There is not a shred of evidence that any human-type creatures have ever so landed but, it must be admitted, there is quite a body of reports now extant that non-human-looking types have turned up from time to time in association with odd-shaped structures from the sky. Then, of course, there are angels and devils, poltergeists and djinns.

There could be many very good reasons why beings intelligent enough to have developed interstellar travel (by photon-reaction engines or by teleportation or what-have-you) should be unable to land on this planet, or possibly, not want to. And, who are we to say that they *could* not do so virtually unknown to us. Nonetheless, who is willing to be so bold as to state categorically that any intelligent entity, let alone a "space-person," has landed on this earth?

Yet, if some Ufos are cruisers constructed by such beings, why have they not been detected? It does not make sense unless we are really so far behind them that we simply cannot conceive of their ideas, activities or competences. Of course, it is true that we are ourselves today rapidly reaching a point where some of our own activities may be prosecuted absolutely without detection—*vide*, electronic scrambling of coded messages in such a manner that it would take even a Univac computer a million years to run through all the possible combinations to be sure, by the law of averages, that it finally hit the right one for decoding the message. If we do have space visitors, they could be so far advanced compared to us that they might be able to just pop in and out of here without detection, and even—as some apparent crackpots assert—take an active part in our affairs, unbeknownst to us. This, naturally, is a very alarming thought, but frankly I don't credit the assertion and I would have to see a lot of practical evidence of its having happened, before I would do so.

In the meantime, there is this fourth category of possibilities to explain *some*, if not all, Ufos.

There is obviously a lot wrong with our ideas as to what goes on up in the sky

and "beyond" our atmosphere. Only last summer some very serious but open-minded meteorologists demonstrated—by sending a crew to Tierra del Fuego at the extreme bottom-end of South America—that radio transmissions can be reflected back to earth not only from fifty, sixty-five, and a hundred and forty miles up, but possibly from 6000 and even 20,000 miles. This is bad enough but then there has recently also been a distressing reassessment of our beliefs about temperatures as you go up. It used to be thought that the farther up you went the more the temperature dropped towards absolute zero (-273° C.) in "space." Now, we have an upper frightfully hot layer and there is even doubt as to whether space is infinitely cold or infinitely "hot"—radiations passing through same possibly being converted directly into heat on striking any body. Then, space turns out to have a lot more matter scattered through it than was previously thought; and, when it comes to the radiations pulsing through it, we are yearly being left more bewildered by the mounting list.

One would have supposed that this march of discovery would have prompted a decrease in dogmatism among those who study such matters, and particularly among

those who interpret their findings for public consumption; but this is not so. Interpretations of such discoveries are propounded with ever-increasing assurity just as if each had finally capped and sealed all our knowledge of the whole business. Further, while proper scientific caution is often exercised in this interpretation of what has been observed, ever more vehement denials of any suggestions as to what could remain to be discovered are heard. It is strange indeed that so many fine minds devoted to discovery, and knowing how much we *don't* know, should so very often categorically deny even the possibility of anything in general or something in particular remaining to be discovered in their own fields. Worse still, are sweeping statements issued by both real experts and by mere "experts" sneering at or condemning everything they don't believe in or just don't like. A glowing example is the statement mentioned in our opening paragraph. This is best quoted in full, since it appeared in the April, 1957 issue of *MISSILES and ROCKETS*:-

"A telephoned warning this page respects, quoted by a Government man of science from the University of Chicago, biochemist Jaques Loeb; 'If a man claims there is a *gaseous vertebrate* (ital-

ics ours) floating around the atmosphere, it is clearly his duty to prove it and not the duty of every other scientist to disprove. Otherwise we'd be spending our lives disputing the claims of every charlatan and crackpot."

We do not know if anybody has yet suggested that some Ufos could be "Gaseous vertebrates," but if they have, I am inclined to agree with Dr. Loeb, since the 'vertebrate' bit would seem to be highly improbable in anything gaseous, to say the least. On the other hand, it is possible that Dr. Loeb is referring to the Wassilko-Serecki "theory" or suggestion that some Ufos may be life-forms of a highly tenuous composition but charged with and "feeding" upon energy in some form or forms. The point here is, rather, the stated profession of the stater of this statement. If we caught such a life-form, would we take it to a biochemist? And if we did, on the grounds that he is professionally concerned with the chemistry of life-forms, would we get a proper identification: a *gaseous vertebrate*, and a colloidal bladder filled with free ions, are *not* the same.

The major fault with this statement, however, is its last sentence. Why should even a biochemist sneer at anybody for making suggestions as to how possibly to explain something about which he admits

he knows nothing and apparently does not want to try to explain or even to consider. Charcot and Mesmer, not to mention Galileo and F. Bacon, Esq. were all called charlatans at one time or another, and many a crackpot has made excellent suggestions. The onus to prove a mere suggestion indeed rests upon the suggester, but it is incumbent upon researchers as a whole to at least try to investigate anything that is not explained. Simply to run away from such a problem is pure intellectual cowardice. It is unfortunately a procedure that is far too common, especially where Ufos are concerned.

But there are public statements of another order that are even more pernicious. A classic example may be quoted from a United Press release of the 9th August, 1957, regarding the fifty-pound hunks of angular ice that fell on a farm at Bernsville, Pennsylvania earlier that week. This read as follows:-

"Huge chunks of ice that fell from the sky to the farm of Edwin Groff of Bernsville probably were blown in from the west on a jet stream according to Dr. Malcolm Reider of Reider Associates, a local chemical laboratory. Dr. Reider said an analysis of the ice indicated it was formed in the western section of the nation because of the presence of a high amount of alkaline

dust. He said the ice was blown eastward at 400 to 600 miles per hour by the jet stream, a high altitude air current. He theorized the ice chunk fused and got too heavy for the air stream to support. Groff was working in his fields earlier this week when the big chunks of ice plunged into the ground near his feet."

It is hard to preserve one's equanimity while reading such a statement and thus doubly hard to remain objective when discussing it. One wonders if anybody could possibly be so stupid as to believe that anybody else is so stupid as to believe such a tale. Are we seriously asked to believe that the western section of our nation is the only area in the world to have a high alkaline dust content in its air; that fifty-pound hunks of ice can defy gravity over three thousand miles; that fused ice has angular edges; and that air friction, which almost burns up planes at sonic speeds, won't melt ice? If lots of little bits of ice (hail) can fuse while roaring along at 600 m.p.h. would the resultant hunk be devoid of a granular structure; and why should it fall only when it got to a weight of fifty pounds; why not at a pound or at the proverbial golf-ball size of the largest hailstones; and why didn't it at least melt its edges off while falling? Yes, indeed! Further

comment on this particular piece of pseudo-scientific gobbledegook is not necessary but some comments on its significance are so.*

This is the kind of rubbish that is put forth in the name of Science—poor science—day after day on all manner of diverse subjects. *Doctor* this or *Professor* that, *Government Scientists* and *Authorities* and *Experts* sound enormously impressive to the poor benighted public who readily admit that the workings of current scientific theories and technological procedures are quite beyond their understanding. When something unexplained (or sometimes apparently inexplicable) occurs, and is reported but cannot be immediately brushed aside as a mistake or a lie, the public sometimes continues to demand an explanation and somebody then has to be found who is willing to come up with one. The utter irresponsibility of many of these "explanations" is not only amazing; it is inexcusable.

*Subsequent to writing the above, there have been further falls of ice in Pennsylvania. All told, there have been four major incidents: (1) At Bernsville, July 30th, two pieces, one weighing fifty pounds and angular; (2) a 500 pound chunk at Shilmogan on August 14th; (3) an unspecified-by-weight fall at Chester, on September 8th and (4) a forty pound chunk of porous, semi-melted agglutinated ice found in a field at Annandale on September 18th by a road-working crew. It is said that these falls, when plotted on a map, fall along a perfectly straight line. This may have special ufological significance in view of Michel's theory in his new book.

The complete audacity of some is really beyond belief.

The procedure is to get an expert or an alleged expert in almost any subject, but preferably with a doctorate or a secret government job, who is willing to say anything, however illogical, unscientific or stupid. Then the public is fed his statement and told that it explains everything. This attitude on the part of these experts—not, we suspect, of any real scientist—and of the Press on such occasions is execrable, very nearly criminal, and ultimately extremely dangerous. Those giving out the statements are outright charlatans.

No wonder Ufos are so highly suspect. What is the great mass of the public (who have never had the disturbing experience of seeing something in the sky with their own eyes that they cannot explain or identify) to think of the business when the entire Press, if reporting the incident at all, refers to it in ribald phrases that hint at a superfluity of bad liquor, bad dreams, bad observation, mass hallucination public stupidity, hoaxes, lies, and flying-chamber-pots: and then, if all this fails to subdue the observers, drags in a raft of "experts" with high-sounding prefixes to their names who, sitting on their swivel-chairs in laboratories miles away, deride the whole thing and explain it away arbitrarily in

a manner so foolish and fraudulent that even third grade school-children can spot its falsity. Nor is this all!

It may come as a surprise to many to learn that quite a number of things that are ostensibly explained in full in standard textbooks have not really been explained at all; at least the given explanations neither work nor are amenable to logic. Sky phenomena rate high in this category. A good example is Mirages. If you don't believe me, get out an Encyclopaedia or any standard textbook that covers the subject and start reading.

You will be told that mirages are caused by reflections from the undersides of layers of hot air in the sky above, which act like the "ning-ning" or shimmer on hot road surfaces. This is splendid and fairly simple and would seem to explain everything—until you see a few mirages yourself or come to read descriptions of them as given by some reliable travellers and truly scientific investigators, even meteorologists. Then, whatever else may seem odd to you, one fact will stand out. Where are the originals of the things seen in the mirages?

Even if you don't believe somebody who says he saw a line of fifteenth century ships ploughing over a rough ocean in the sky over the Sahara in 1928—and somebody

did say this—where were the ships? In Hollywood, perhaps? But where are the islands, cities, boats, snow-capped mountains, and all the other things seen daily all over the world in mirages? If you really settle down to take compass readings of such sights and then get out charts, maps, and atlases, you will find in almost a hundred percent of cases that no such things exist anywhere beyond the alleged reflection in the sky. What is more, you can take photographs of some of these alleged reflections—of others you apparently cannot. What, in fact, is going on here; and not only in the textbooks, but in the sky?

There are all manner of other fairly common sky phenomena that, having been seen so regularly by so many, are complacently accepted and allegedly explained, though the explanations often defy logic, or at least our present scientific understanding. Ball-lightning is one; the Aurora Australis at the equator is another. Then, there is the appalling collection of assorted junk that has fallen out of the sky.

This was steadfastly denied until very recently despite everlasting reports of its occurrence since earliest times, and even when it was published in the journals of such respected scientific bodies as the Royal Society of England and the Meteorological Socie-

ty. If you want a whole catalogue of them in one go, read *The Books of Charles Fort*. There are rains of blood, frogs, fish, sea-snails, insects, worms, wool, seeds, ice, coke, gases of many kinds, and all manner of unidentified materials. If you prefer, you might peruse the publication of the Fortean Society, entitled DOUBT, that has carried on Fort's work since his death in 1932. From the references given in these you may go back to the original descriptions in newspapers and journals and judge for yourself. You will be surprised to find that a rain of fish actually landed on an ichthyologist (a fish expert) in Mississippi in 1950; and that the British Air Ministry seized several large lumps of stuff that looked like ice but were actually pieces of a kind of 'plastic' or glass, that landed on England from the sky.

All this junk comes down out of the sky, all right! This cannot be denied either by 'experts', experts, technologists, or even government officials. Real scientists have kept more 'mum' about this than about things that don't come down out of the sky—such as Ufos—and very rightly, for when you actually have such an "offensive" object in your hand, you *have* to do something about it, and theories to explain it have to be very carefully propounded. The Press also tends to do a

more objective job on such occurrences and well they, too, might because a Government ichthyologist clobbered by a one-and-a-half-pound fish at breakfast time in mid-country is apt to get a bit peeved if he is accused of being drunk or having hallucinations. Government scientists aren't members of the public; they are public servants!

There is, however, an obverse side to this business of unauthorized objects coming down from the sky. This is the *going-up* phenomenon. If you can get ahold of any reliable reports of what went up in any tornado and of what subsequently came down, or was found *down* after the tornado had passed, you will immediately discover that an awful lot more sometimes appears to go up than comes down. Of course, like missing persons, you may calm yourself by simply saying that they just went somewhere else. But did they? And to where? I know of one well-documented case of a two-storey chicken brooder with two men in it that went up in a tornado but, while some lumber and a lot of chicken *feathers* and the body of one man were subsequently found scattered over a large area of farmland, only about ten percent of the chicken *bodies* were accounted for, one man has never been found, and not one sin-

gle bit of the heavy metal roof of the building ever turned up again. This was well inland and far from any wild area where a couple of tons of sheet-metal roofing and some fifteen hundred chicken corpses might be overlooked. Where did this junk go?

Stuff that is sucked up in tornados is the standard explanation for stuff that comes down unexpectedly from a clear sky. But consider a crowded chicken brooder for a moment. It contains a wide variety of items from sheet-metal roofing to hens' eggs. Everything that goes up must, according to the old adage, come down; also, tornados could have some kind of sifting device, whereby the down-coming is delivered piecemeal by size or weight. But, by *what* process does a tornado—or a jet stream, for that matter—deliver material qualitatively—namely, fish of all sizes in one place, frogs in another, and ice in a third? (And why doesn't it deliver plucked chickens?) Surely, there must be a lot of stuff of the same size or weight as a plucked chicken in a smashed barn, or as fish or frogs in a fishpond! Charles Fort went over all this long ago, but nobody has tried to do anything about his suggestions and, yet, neatly sorted, as well as assorted, junk continues to rain down upon us.

Things that come down,

must come from somewhere—especially *live* fish and frogs. The 'somewhere' is manifestly up above us. Do they reside up there and sometimes get shaken down, or do they wander off an end of floating "continents" of ice as Fort suggested, or do they rip around the earth in slip-streams as this Dr. Reider suggests? If so, how do they defy gravity? Or does earth gravity have a "blind-spot" or belt around its waist, like a giant bar-magnet? If so, can junk be shot up into this, and remain alive up there long enough to be transported to another continent before being sorted into species and later dumped?

Of course, all this sounds like unutterable rubbish and we are more than willing to admit that it is, but just how are we to explain these phenomena? You cannot just leave them lying around; they are too much of a challenge. Nevertheless, we must stop speculating and try to tackle yet another aspect of the problem.

There are now several so-called models of the first artificial satellite that is allegedly to be shot into the upper atmosphere next year. These models vary from the size of a large grapefruit to a fair-sized barrel. We don't yet know what size the real one will be but we are already being confidently told that it will circulate the earth at

some two hundred miles or more above us, that it will not be bigger than a football, and yet that it will be "plainly visible to the naked eye for certain periods at dawn and dusk." Now what kind of nonsense is this?

Try picking out an apple on a tree at a mile, a candle-flame on the deck of a ship on the horizon, or a super-bomber at 40,000 ft. on a clear day. Using a powerful telescope we are told that you could pick up a candle flame on Mars. We can only believe these statements but, if you come to think about them, there is something very wrong here. In conjunction, they are nothing but a neat way of avoiding another issue—namely, what can be seen in between these two points and does anybody look for anything in between.

Finally, there is the astonishing amount of cosmic junk, that is already known to and accepted by proper science, that floats about within our little solar system.

The most competent current investigators of this phenomena have propounded the theory that one of our sun's family of planets blew up about 300,000,000 years ago, giving rise to the asteroids, meteorites, and a lot of gas and other stuff. They contend that this planet was composed of concentric layers of metals, covered by layers of rocks of various densi-

ties, and finally by a coating of glass, which latter gave rise to the *tektites* that fall on this earth. All this is residual matter now wandering about this part of space, and bits of it, they contend sometimes rush into or through our atmosphere.

How do we know of what this may be composed? And how do we know, as yet, exactly how it is going to behave when it gets within, say, the new outer limit of 20,000 miles of our atmosphere, however tenuous? The density of some bits might cause them to float, and to glow, and be whipped about by jet-streams at sundry altitudes above the surface of the earth. Great Fortean rafts of ice could come drifting in only to break up in an atmospheric storm and spatter worthy Pennsylvanian farmers with fifty-pound left-overs.

The fish, frogs and snails I don't like. They are oxygen-breathing creatures that appear, when they have been properly examined, usually to be exactly of recognized earth species. However, if it should ever be proved that such items didn't go up anywhere, they must have been up there in the first place and, for the life of me, I can't think of anything more "logical"—or at least amusing—than old Charles Fort's classic suggestion that they fall off the edges of their ice-rafts, or blobs of water, or

asteroids, when migrating! That, at least would explain their neat differentiation by species, if not by size. But we, too, get very extreme. Let us stick to facts and suggestions, and particularly our famous fourth one.

To reiterate, this is that at least some Ufos are examples of this assorted, non-animate, spacial junk that is naturally indigenous to our solar system. Such stuff could not have any 'desire' to land on this earth; it need not invariably be subject to gravitic attraction, and if it is, it probably for the most part burns up or volatilizes before it reaches the surface of the earth. It could appear to behave in an astonishingly swift and erratic manner to an observer on the ground, by whipping along a slip-stream and then suddenly dropping below it, to be flipped off at an acute angle by another air-current, a manoeuvre that would squash any animate pilot. Some of it might play tag with our planes due to forces of attraction and/or repulsion of which we know nothing at present. It might glow by reflection or from some internal cause. It might come showering down in the form of "angel's hair," blobs of mauvish refrigerated jelly, hunks of glass, great glowing globes that flatten standing grass or bushes and then dissolve, or in lenticular fragments that sway or whip about like a

falling paper-plate. Long "cigar-shaped" bits might sail majestically across our upper atmosphere and they could be going at cosmic speeds very high up and be enormous, or be travelling comparatively slowly at lower levels and be fairly small. Some hunks could be big enough and far enough away to get between the rim of the moon and a startled astronomer looking through a telescope focussed at exactly the right range from earth. There could be an enormous amount of this junk meandering about between the proposed orbit for our artificial satellite and the more usual focussing points of our telescopes, hidden by the blanketing effect of light-scatter in our atmosphere.

However, this is no excuse for saying that Ufos don't exist, and it is no reason for calling anybody, who says they have spotted one of them coming down, a liar. Moreover, it is the direct responsibility of "science" and of scientific research workers to get to work to try to explain these things with a view to trying to catch some of them and describing them. Such workers *should* give up a specific amount of their time to consider and examine every suggestion that is made as to what they might be. They would, in some cases, be much better employed in doing this than in doing the things they are doing now.

The Wassilko-Serecki Theory

In your February, 1957 issue you ran the first of my series of articles on Theoretical analyses of the nature of Unidentified Flying Objects and this was primarily devoted to a theory that some, if not all of them, may be life-forms indigenous to our upper atmosphere or to space. This theory was ascribed to a lady by the name of Zoe Wassilko-Serecki. Unfortunately insufficient credit was given to its author therein and certain rather misleading statements crept into what accreditation there was. These I would now like to correct.

The story behind that article was odd to say the least. Being myself primarily a biologist, I had always been interested in the suggestion that some Ufos might be life-forms—a point that was long ago mooted by Charles Fort, and latterly reiterated by the U.S.A.F. in its Project Bluebook Report. I had no theory upon the idea and had never encountered one until late in 1955 when an unknown well-wisher sent me a photostat of a mimeographed copy of an article, in German, on the subject. This bore no authorship and there was no indication as to its origin. Its sender, a casual listener to a radio program I then had, could tell me no more than that he had received it from a friend in the American Armed Forces in Germany.

When it was translated I immediately saw that its author had done a great deal of thinking on the subject and I therefore took the work as a basis for not a little research into the flight of insects and humming birds, the comparative sizes of animals at different levels in the oceans, and all manner of corollary matters that had been assembled as evidence for the possibility that Ufos *could* be animate or subanimate. When I came to write the article for *Fantastic Universe*, I incorporated my findings with a paraphrase of the original article.

About that time a good friend of mine who has for many years been a most assiduous collector of data on Fortean phenomena—Stanley I. Rowe—sent me tear-sheets of the German article but in *print* and in *English*. This too was cropped head and foot but did have the author's name on the head. The name was Zoe Wassilko-Serecki.

Then, even more unexpectedly, another friend rang me to say that he had been cleaning out his collection of magazines and had come across an article right up my alley, in an old copy of *The American Astrologer*, all about Ufos being animals. When the copy arrived I found, at last, I had the original, and I immediately rang our Editor who kindly offered to make what changes possible at the last

minute before publication. These could not be sufficiently extensive and have proved to be somewhat misleading for another reason—namely, that I still did not recognize the name of the author. Its significance was first pointed out to me by Isabel Davis, Secretary of the C.S.I. of New York, whose article on Saucer Contactees appeared in the *November*, 1957 issue.

The author, in fact, turns out to be none other than The Countess Zoe Wassilko-Serecki, a most prominent figure in Fortean fields of research in Europe since the early twenties, and who was the *discoverer* of the famous Romanian Poltergeist girl and medium whom she took to London to be studied by the famous Dr. Harry Price. The Countess is President of the Austrian Astrological Society and is, of course, not only just "residing in Austria" but has always lived there despite the terrible vicissitudes through which her country has passed during her lifetime.

The theory she has developed actually first appeared—she now writes me—in a publication entitled *INCONNUÉ* (Editor Pierre Genillard) in Geneva, Switzerland in 1955, and was then reprinted by Clancy Publications in New York in their magazine.

There is one other point that I should like to clarify. In my article I inserted the

phrase "rather surprisingly" when giving the origin of the theory as being an astrologer. The Countess wishes me to explain this. I will be quite frank in saying that it did come as a great surprise to me as I never previously heard of astrologers being interested in Ufology, and I will be even franker in saying further that I have not previously encountered any theory based on astrology that so closely intermeshes with currently accepted scientific theory and which—most surprisingly of all—did not once call upon astrological theory in its promulgation. All Ufologists will be equally surprised, and science-fiction readers will doubtless be quite startled, as astrology is a taboo subject in their field.

In conclusion, I would like to say that the Wassilko-Serecki theory while being

one of the four most logical yet put forward to explain at least some Ufos, has been and still is gaining ground over all others as an explanation of many sightings and also of several related phenomena, such as stinks from the sky and notably of falls of *Angel Hair*, jellies and other substances. It will have to be seriously considered in the future not only of Ufologists but, if the "saucer business" persists in going on, by those scientists who will eventually have to tackle the problem at the request of the public, the press, or officialdom. Meantime, I am hoping that FANTASTIC UNIVERSE may be able to find space for a fuller elaboration of the theory together with the results of its many corollary studies in a Future Issue.

I.T.S.

NEXT MONTH —

Avram Davidson's THE BOUNTY HUNTER

Theodore Pratt's SEED

Robert Moore Williams' SON OF JALNOR

Donald Keith's COMMAND PERFORMANCE

and

RENDEZVOUS WITH DESTINY, A New Novel by JOHN BRUNNER

— in FANTASTIC UNIVERSE

freak show

by MIRIAM A. deFORD

His get-up was a humdinger. It would fool smarter folks than these yokels. Why it almost scared her, at times.

"WHO RUNS this outfit?" Rasi asked the first roustabout he saw on the carnival lot. He flicked a thumb toward the poster announcing the Human Oddities.

"Spencer," grunted the roustabout.

"Is he around?"

"Don't know why not."

Rasi lifted the flap of the tent, and found it empty. He walked toward the cluster of trailers drawn up on the new grounds an hour before. He had followed the carnival all night from its pitch of yesterday.

He knocked at the door of the nearest trailer. It opened a crack and a colorless eye in a pink face crowned by snow-white fluffy hair peered out at him. He had been lucky; this must be one of the Oddities.

"Can you tell me where I can find Mr. Spencer?"

A pink arm, apparently unclothed, pointed to the left.

"That's his car, over there—the green one with the window curtains," said a husky feminine voice. "But brother, watch your step. He's mad as hops. Goofoo the Nuthead

Miriam Allen deFord, who needs no introduction to any SF reader, returns with this unusual report on a threatened alien invasion, written from a different standpoint—that of the invader rather than the invaded. What will we look like, to the alien assigned to observe us?

didn't show up today. Blotto again, I wouldn't wonder. Prob'ly locked in the hoosegow at Cedartown."

The door closed on Rasi's thanks.

Goofoo—so that was the name, the stage name at least, of the likely-looking one he'd picked up after the carnival closed last night in that other town. Three drinks from his special flask, and Goofoo had been easy to deposit in a nearby cornfield to sleep it off for 24 hours or so. Everything was working out right.

Spencer came to the door with an irritated frown, but at least he was dressed. It was easier to look at them when they were covered. Rasi had been intensively trained and explicitly briefed, his camouflage was perfect, but nobody can control his psychological reactions completely.

"Mr. Spencer?" he said. "It's about a job. I was told there might be a vacancy."

The heavy-set middle-aged man with a shock of greying hair stared at him.

"Who told you?" he growled. "Anyway, I run a freak show. There'd be nothing for you."

"If I may come in for a moment—"

The manager opened the door grudgingly and stepped aside. It was a neat little place, shipshape and compact—a lot better, Rasi guessed, than the spot that would be

allotted to him if he should be taken on.

Spencer sat down on the bunk and waved him to the chair.

"Make it snappy," he said. "I've bailed out that drunken idiot for the last time. But you couldn't take his place."

Rasi did not answer. Instead, he took off his hat, then his wig. Then slowly he removed the mask, with its unobservable transparency in the middle of the forehead. Spencer sat with his mouth open, his face turning slightly green. Rasi pulled off his gloves. He stooped and began to unfasten his shoes. Spencer put up his hand.

"That's enough." His voice sounded thick. "I don't know. I thought I'd seen everything. It might be too much—I don't want to have to be paying damages to women who have miscarriages after they see you."

"Good God, man, how have you got by up to now?"

"With the mask, and the wig, and shoes and gloves," said Rasi calmly. What would Spencer think, he reflected, if he knew that his own appearance was as revolting to his visitor as the visitor's could possibly be to him? And there were so many more of Spencer's kind!

"Then why do you— And why pick this outfit? If you can put it across at all, you could be a headliner with the Biggest Show on Earth."

"That's just what I don't want. I didn't choose to be like this. The fewer people I make sick the better. But I have to do something; I've come to the end of my money. So I have to use my only asset."

Spencer was recovering; the showman was taking over. He gazed meditatively at Rasi.

"If the costume was right—" he murmured. "And with a good spiel. You can't talk—that's it. You're a—I've got it! You're a Martian captured alive from a flying saucer that crashed. How would that do?"

Rasi repressed his amusement.

"Wouldn't your—wouldn't the government be interested in that? That Air Force project that's investigating?"

"They wouldn't bother. Just the fact that you're a carny attraction would prove to them that you're a phony. That whole flying saucer business is just bushwa, anyway. O. K.?"

"O. K."

"So let's talk money. You understand this isn't any million-dollar set-up, don't you? We can't pay much. And this is just a try-out."

"WHEN YOU'VE got the job, somewhere in the Middle West of North America, report in," the Director had said. "Then we'll give you your detailed instructions

about the later sowing."

"I feel like a beginner."

"I know what you mean. But a beginner wouldn't have got this assignment; we picked you from the whole Service. This is the big one, Rasi. Time's running short; we've got to get out of here. The ships won't last much longer. They were hardly fit to take off in after the Antea disaster. And you're perfect; you've got it all down, the language, the background, everything. With the mask, I defy any of them to guess."

"That's just it. If I'm to appear half of the time looking like a human being—"

"Like what we call a human being, Rasi: don't forget that. They call themselves human beings too, remember."

"Well, whatever. Isn't there danger I'll be recognized before I can get things set?"

"By whom? You must realize they're a lopsided lot. They've progressed mechanically, but they're primitives psychically and socially. And like all primitives, they're a mass of conceited arrogance. There's no one in a million of them that honestly believes, deep down, they aren't alone in the universe. To them, you'll be just a freak—especially when we've taken the precaution to keep you away from the most populous centers. That's why we picked this method."

"Am I permitted to ask if that is the only reason you

chose that particular sector?"

"No, not the only one. The *buad* will radiate fastest from the center of a continent. And the middle of summer is the fastest-growing season."

"But then that will leave the whole Southern Hemisphere unaffected. Shouldn't there be two of us—one in each hemisphere?"

"We think not. It will spread in both directions. By the time their summer's over, it will be spring in the southern half and the *buad* will proliferate there."

"And when I've sowed all of it, you'll recall me? Excuse me for being insistent, Director, but I've got my sex-group and our offspring to consider."

"You'll be recalled unless you get yourself killed first."

RASI HAD expected to find it hard to associate with the rest of the freaks. But they differed so little from the normal population that his revulsion was lost in his general qualms. And they did not seem to shrink from him as he had anticipated—as the public shrank in horror. He found out why very soon.

Within a few days he had discovered that though such freaks as the Fat Lady (why was there never a Fat Gentleman?) or the Living Skeleton or the albino girl who first directed him to Spencer were formed by nature, and such as the Tattooed Man

and the Fire Swallow were permanently modified by outside agencies, the Human Oddities included also downright fakes, like Roseanne.

Roseanne was the Headless Girl, with nothing above her very décolleté gown but a network of tubes and pipes. She was done with mirrors. She and the albino, whose name was Ethel, roomed together. The first night, when the last show was over, Roseanne strolled over to him.

"Hi!" she called. "Welcome to the madhouse. Were you sleeping?"

That had been his chief worry. He would take willingly the lowest pay that wouldn't arouse suspicion, but he must have a place of his own where he could have privacy. He needn't have bothered. He inherited the trailer which had accommodated Goofoo. Every man in the show had served notice at the beginning of the season that he was quitting if he had to bunk with Goofoo. The place was filthy, but he could clean it out. He told Roseanne where he was.

"We've got three days here," she said, "so there's no packing to do tonight. We thought, Ethel and me, maybe you'd like to come over to our joint for a nightcap. After you've got your disguise off, of course—Ethel's cat'd have her kittens too early if she got a sight of you the way you are!"

Then he understood: they took it for granted that the mask, in which Ethel had seen him that morning, was his real face. A weight of apprehension dropped from him.

"Natch!" he said. "Be there in ten minutes."

"Not that your get-up isn't a humdinger," Roseanne added. "It would fool smarter folks than these yokels. It almost scares *me*."

"Too good for this crummy small-time carny, if you ask me," commented Ethel in her husky voice. Just being an albino wasn't enough of a show; she danced and sang torch songs too.

Before he left the trailer he activated the set implanted at the base of his brain and reported to the Director. Reception was pretty good.

He noted carefully in his memory-bank the instructions for distributing the *buad*.

A single grain of *buad* was enough. Each time the carnival left for a new pitch, Rasi deposited a grain in the lot. It should begin proliferating within a day. The effects would start a week later, long after he was miles away. It spread so fast in all directions that it was impossible to trace it to any particular focus.

THE WEEKS went on. Rasi watched anxiously for news. By this time there should be rumors, at least. The carnival

season would end in less than two months more. Finally he could wait no longer: he put in an emergency call to the Director.

"You should not have called," said the Director sternly. "We had to risk one call to get you started, but we can't take a chance on having one of their astronomers get suspicious about unaccountable disturbances."

"I'm beginning to wonder—could the *buad* be too old?"

"It's all we have left, Rasi, after Antea. It was tested and passed. It's got to work.

"Are you having any other trouble?"

"Not to speak of—I'm having some difficulty keeping away from one of the female freaks, that's all."

Rasi could feel the vibrations of the Director's amusement.

"I won't tell your family. Just watch yourself."

"Oh, I am!"

But it wasn't so easy. Roseanne hung around all the time.

"I can't bear these real freaks," she told him. "I don't mean Ethel—she's O.K. The poor kid can't help being born without any pigment in her skin. But the men—ugh! After all, I don't belong in a joint like this. I've entertained in some swell night clubs. But I had a run of bad luck—"

And so on. All of which was gratifying, since it

proved she didn't suspect him. But it kept him acting a part all the time.

He got nothing useful from his call to the Director. Either the *budad* would start working soon, or it was no good. Rasi turned cold; he knew what that would mean. If only Antea hadn't gone sour! Eight generations since their own home exploded, the few thousand survivors living and breeding in their ships and hunting desperately for a place where they could live, then locating Antea, and feeling that their troubles were over. A Preparer just like him had landed there, sowed the *budad*, waited till it softened up the inhabitants; and then they had taken over. Then barely a hundred years, with the ships slowly rusting in port, and the same thing all over again—a sun about to turn into a nova, a scramble for the ships, and out into space once more: but this time with ships that wouldn't last for another eight generations.

And now here was this perfect planet—and what was wrong with the *budad*? The fate of all of them depended on him alone; the Director didn't need to tell him that. Once, when he was very young and just starting training, he had asked why they needed the *budad*—why not just move in? Or why not ask to be allowed to colonize?—there weren't so many

of them that they couldn't find an island nobody else wanted.

Because, he was told patiently, so far as they knew, there was no other race exactly like themselves—no other really human race, was the way they put it. And xenophobia seemed to be a disease as widespread as the galaxy. They couldn't conquer a planet by force, with their own ingrown pacifism—and there wouldn't be enough of them anyway. There was no hope that they would be welcomed as colonists by any alien race.

The answer was the *budad*, the wonderful plant that was all they had saved of value from their ruined far-off home. There, everyone had grown up under its influence, and the mutation had bred true. Nobody knew how long ago in the dim past the *budad's* strange properties had been discovered. Once sowed, the tiny, shining grains spread like wildfire, and as soon as the quick-growing plant was ripe its spores filled the air with an invisible, impalpable dust, harmless to breathe, but with a specific effect on the nervous system. No one who breathed *budad*-dust could ever be belligerent or aggressive or angry again: there could be no wars or fights or murders in a *budad*-planted land. It had turned the fierce inhabitants of Antea in a few months into a friendly, recep-

tive populace, and his people, freely welcomed, had settled there amicably. It would do the same for this planet—but not if the precious grains, so carefully preserved for so many centuries, were no longer viable.

Summer was passing. There were only a few weeks left before it would be too late. All day Rasi, in his proper person, cavorted and glowered and gestured as a captive Martian. (That was ironic: the planet they called Mars had long ago been visited and found unlivable.) When the last show was over he hurried to his trailer to put on the disguise. Not to mingle with the others would have made him too conspicuous. Fortunately he had become labeled as Roseanne's boy friend, and she saw to it that other women kept hands off. More fortunately, he managed to include Ethel in most of their meetings; his training had taught him the sex mores of these people, and he knew—so different from their own customs!—he would be safe from any embarrassing moments as long as there were three of them together.

And every time the carnival moved, before he left he planted the *buad*. He remembered the report of the Preparer on Antea: within a week of his first planting, he had begun to hear rumors of its effects. Intertribal

conflicts had ceased, enemies embraced, violent crime dropped to zero, even predatory animals, though not so strongly influenced, had grown less ferocious; yet the Anteans had lost none of their natural liveliness and enterprise, any more than his own people had done.

But there were no such rumors here. This race had a primitive sort of communication, by sight and sound, which reported all untoward developments; it remained silent as to this. Indeed—and Rasi's heart sank—in the very town where he had planted *buad* three weeks before, a conflict had broken out between a group of workers and their employers that ended in a pitched battle and the calling of professional soldiers to intervene. That, he knew, would have been totally impossible if the *buad* grain had been good. But there was nothing more he could do. There was still one faint hope: perhaps some of the grains were still alive, even if the rest were not, and even one successful planting would be enough. All he could do was to keep on until the dwindling supply was exhausted. Precious as it was, he took to planting two or three grains instead of one at a time.

On a night in what they called August, the carnival packed to move to its next pitch. Rasi, ready and waiting

for his trailer to be hitched to a truck, stepped as usual into the blackest shadow he could find, the seed-pouch in his hand. He was at the edge of the lot, where a spreading tree cast a broad black shade. He walked to it softly, looking carefully around to make sure he was alone, and stooped to soften the earth beneath the tree.

There was a mere whisper of sound. He stood and listened—was it only the leaves moving in the wind? Across the lot were the lights and bustle of departure; they would get to him in a few minutes; he must hurry. He stooped again, scooped out a tiny hole, laid three grains of *buad* within it, and turned to go.

If his sight and hearing had been like theirs he would have missed it: he must indeed have missed it all the times before. Quicker than they could move, he reached down, and his hand caught a wrist and clamped on to it.

He pulled the struggling figure up and dragged the intruder away from the shadow.

It was Roseanne.

She tried to clench her fist, but he forced the fingers open so that the bits of dirt fell into his glove. Even in the darkness he could see the three shining grains of *buad*.

She stopped struggling and stood still.

"So you know," Rasi said quietly. "You know who I am

and what I am doing here."

She gazed at him calmly.

"Not enough," she answered, and he noticed the different intonation from that of the raucous Roseanne he knew. "Not just who or just what—but enough to stop you."

He *could* not grow angry; he came of a race conditioned by breathing *buad*. But his voice shook.

"You have followed me every time," he accused her, "and undone my plantings."

"Every time."

"But why? Why, when you didn't even understand?"

"Because I knew from the beginning you were alien—you were not one of us. And I knew whatever you were doing here must be for your own ends, which are not ours."

"Listen," he said desperately, "we've been friends—"

"Have we?"

"I realize now you were only keeping me under surveillance. But let me explain."

"Go on."

"My people have no home. We could find one here, if you would let us come. This plant, this plant whose seeds you have dug up and thrown away—"

"Not thrown away: destroyed."

The last hope died, that she had scattered them where some might sprout. But he went on, heavily.

"They could do no harm. All they would do would be to spread a dust of spores that makes those who breathe it kind and gentle. Is that so bad?"

"Bad enough, when it means that then this planet would be softened to welcome an alien invasion."

"But what do you care?" he cried. "We wouldn't hurt you. All we want is a quiet spot where the few thousands there are left of us could live in peace."

"This is *our* planet," Roseanne said, and her voice was hard. "We got here first."

She laughed suddenly.

"Did you honestly think I was fooled by that mask and wig and all the rest? It was so easy to deceive a cheap carny entertainer, wasn't it? It never occurred to you that I was *waiting* for you to turn up—I here and others of us in half a hundred other likely places."

"You mean you intercepted our communications—even between the ships? Who—who are you?"

She laughed again.

"Does it matter?" she mocked. "Who knows?—perhaps I'm from the F.B.I.!"

So. Their own information had been faulty, after all—this race was far more developed than they had guessed. Developed so far as social mechanics went; psychologically they were just as primitive as he had expected. And

now there would no chance to change them by sowing the *bad*. His mission had failed. He and his people were doomed.

"Ready to roll, Rasi?"

It was Spencer's voice, from his car. Rasi looked around—the trucks and trailers were leaving the lot.

"We'll be along, Mr. Spencer," said Roseanne brightly. "See you tomorrow morning in Evartsville even if we have to take a bus to get there."

The manager smiled meanly at a private joke which Rasi understood. Whoever else was fooled, Spencer knew the Rasi on the platform of freaks was the real Rasi. If Roseanne hadn't found out yet—

"O. K., Roseanne, I can count on you," he chuckled. "Have a good time, kids. See you."

They could hear his sardonic laugh as he drove away. They were left alone on the deserted lot.

Rasi said nothing. He waited.

"I had no orders to turn you in," Roseanne said at last. "You know now it's no use your trying. We'll be here, watching. If I let you go, what will happen?"

"I'll be taken back to my ship. They'll send an autosub for me."

"What they—what we call a flying saucer?"

"I suppose so. One kind of them, anyway."

"And then what?"

"Then we'll go on searching, I suppose, till the ships or the *buad* give out. There's not much chance—and the *buad* grains are nearly all gone."

"You'll clear out of the skies here altogether?"

"Yes—there's nothing more in this system for us."

"Can you get word now to your ship?... Don't be foolish: we've intercepted you before."

He activated the transmitter to the Director's frequency.

ROSEANNE watched the autosub out of sight, till the last flicker of the revolving blue light was gone. Then, standing in the vacant carnival lot, she raised her wrist-watch to her lips.

In another language, she said softly:

"Reporting. He's cleared out. The whole fleet should go very soon now; you can have them traced to make certain."

"That's the last. He was the only one of his kind, and we got rid of all the others. There are no invaders left."

"Except us, of course."

NEW SPACE PARTICLE THEORY

A new discovery about electrified space particles, which may add to the difficulties upsetting the artificial satellite program, has been reported by scientists of Stanford University.

Until this report was made, it was generally assumed by scientists that the electrified particles surrounding the earth extend up approximately 200 miles. Now, according to Professor Robert A. Hellwell and his associate Ernst Gehrels, these particles not only extend at least 6,000 miles into space, but are far more numerous than previously believed.

The discovery was made with the assistance of the powerful Navy radio station at Annapolis, Md. Using a radio receiver at the southernmost tip of South America, Mr. Gehrels recorded normal and "ghost" signals from the distant station. By measuring of the time intervals, Mr. Gehrels and Dr. Hellwell determined that the signals had traveled thousands of miles into space and then had been turned back by something in what had been presumed to be empty space.

Under these conditions, the artificial satellites will encounter more matter in space than anticipated by the scientists of *Project Vanguard*. The discovery also emphasizes the fact that despite years of effort by astronomers and other scientists we still know very little about our own atmosphere at higher levels—and even less about outer space.

— The UFO Investigator

the makers

by WINONA McCLINTIC

The police arrived just in time. The mob was shouting "anathema" and battering at the door of the old mansion.

MY OLD friend, Dr. Thomas Felix, had written, asking that I come round Thursday evening. He hinted that his recent experiments had progressed to the success he so richly deserved. I had been a friend of the retired professor, since *Zoology 1* at the University; he had flunked me in order to save my talents for other pursuits. Even in those days, Dr. Felix was an enthusiastic chemist, and many a party was organized in his battered laboratory to drink up the results of experiments, lest the Regents discover to what use the kindly old scientist was putting their crucibles and bunsen-burners. All through my years on *The Yowl* we had maintained our relationship, unhampered by domestic ties—the good doctor was a confirmed bachelor and I could not support a wife. Since the doctor had retired about two years ago when his feet got clumpy, we had seen one another less frequently. This secret research was the cause. Therefore, when I received the note from my old, gray friend, I accepted promptly.

I knocked on the great door of the mansion at the appoint-

Winona McClintic, widely published West Coast writer (including in the Atlantic Monthly) makes a first appearance in these pages with this unusual story of the historic experiments of Dr. Thomas Felix, retired Professor of Zoology, and the reactions of his fellow citizens as he succeeds.

ed hour. Dr. Felix himself let me in, smiling with pleasure and with barely controlled triumph and excitement. He led the way to his study at the back of the house, explaining that Old Tabitha, his housekeeper, was visiting some Serbian friends. The study was huge, two rooms remodeled into one large chamber. Bookshelves occupied three walls, a fireplace decorated the fourth. Here in these leather chairs the professor and I had passed many nights, talking of his work and of the plight of the universe. Now the doctor made us each a hot whiskey and prepared to discuss his recent endeavours. He knew well that my pleasure would be as great as his, if world-fame crowned his achievements, whatever they might be.

"The idea first came to me," said Dr. Thomas Felix, "when I read of an incident in the paper. Whether the article was written by you, I could not tell, but the kindness and almost human charity with which it was presented brought you to my mind as I read. It told of a mother leaving her tiny infants at the Creche with a note saying that she could no longer care for them. The article described how the mother must have crept to the door, concealing her features in a large shawl, carrying the basket. Then, with a last sad look at her issue, she lifts the

iron knocker, and runs weeping from the steps. The sisters open the door, see the basket, and snatch it in with cries of joy and admiration. A scene to wring the hardest heart! The only child abandonment in two hundred years!"

"But why was it necessary?" I interrupted, for I had, indeed, written the article and was still puzzled at the motive. "No one today lacks food and shelter, and, pregnancy being so rare, it is considered almost miraculous to produce young. Everyone wanted to adopt the waifs."

"Ah, we can only wonder at the reasons of the unfortunate mother!" exclaimed the good old doctor. "Nevertheless, that episode set in train my experiments, which only last week reached fruition. My discovery will affect the world when it is made known; only a few details remain to be worked out, but—I have succeeded!"

"That discovery is—?" I was breathless with anticipation, for I had caught fire from the flames of genius before me.

"I have made cats!"

I was stunned by this declaration. The secret of life discovered, a miracle of science in truth! We both were silent as we finished our drinks. The doctor made us each another, and began to speak softly, describing how he had discovered the secret

of creating life, and the steps through which the creation passed. He had a tank of young cats, raised from artificially inseminated eggs, in various stages of development in the next room. He was making them as fast as he could, for the demand would be great when the secret was revealed. Dr. Felix had taken up the study of hydroponics in order to grow his own tomatoes, or, love-apples, as they are sometimes called. The combination of love and hydroponics set the old professor's brain to ticking. Why not create higher-life-forms, hydroponically? Why not, indeed? Robots were not built in a day! And so the experiments began.

"The foetus," explained the great benefactor of the race, "obtains a great part of the fluid necessary for its development from that which is contained in the amniotic sac. Ergo, if the problem of oxygen could be solved by some mechanical device to replace the natural passage of oxygen through the umbilical cord and its vessels, why could not a foetus swallow enough artificial amniotic fluid to keep it alive and developing until the Birth Insult, as it has come to be called?"

"But—oxygen!" I cried, all agog, "that is the problem! What could you do about the oxygen?"

"I solved that problem," said Dr. Thomas Felix with

massive simplicity, nodding his old, gray head.

"You solved it! Astonishing!" I cried, "did you force air through the umbilical cord?"

"That, of course, would not be possible," answered Dr. Felix, reprovingly, "surely, even a basic understanding of the principles of zoology admits that fact. No, the problem must be solved mechanically. I have done so."

I stared at the doctor with wonder in my eyes and my ears ringing.

"Come, Blackie," said Dr. Felix, and he led me into the adjoining chamber. Here was a sight to startle the imaginative and to convince the incredulous. A vast, clean, gray room, a twilight in which an atmosphere of peace prevailed—such was the laboratory of Thomas Felix, scientist. In the middle of it was a large tank from which came a humming, pulsing throb, wonderfully soothing in its effect upon the senses. The tank thrust into the air a number of thin, straight sticks like slender periscopes drifting lethargically. Beneath, and attached to the sticks, drifted soft, gray masses, submerged like dreaming organs.

"My children," stated the professor proudly, "soon to 'live' in the other meaning of the word, to caper and frolic, to suffer, to believe, to hope,

to sleep perchance to dream, to—."

I interrupted the estatic monologue.

"But—?" I stammered, "what are these children? What are those sticks which I observe above the surface?"

"They are umbilical cords," said Dr. Felix, coming back to pure science.

"Umbilical cords!" I cried, "astounding!"

"Elementary," returned the good professor with some heat, "every fool knows that the umbilical cord is the 'lifeline' of embryonic life. The problem, as I have stated elsewhere, was chiefly one of intaking of oxygen and outgoing of carbon-dioxide. The partaking of nourishment in a warm, cozy environment would be, for the foetus, the merest bagatelle, both theoretically and, as it turned out, in actuality. That is why I have named this warm, gray tank: *The Bagatelle*, disregarding Old Tabitha's suggestion of *The Enormous Womb*." He fell silent and gazed at the passing cords.

"Professor," I said respectfully, stroking my whiskers, "start at the beginning. Explain your methods to an amateur."

Dr. Felix simplified his lecture terms for one who was a tyro in the life-sciences. The nourishment problem was resolved after a few tests with amniotic fluid, which is alkaline in reaction, has a spe-

cific gravity of 1,006 to 1,008, and is 98.48% water. Using the trial and error method, Dr. Felix finally devised a solution of amino acids, sugars, fats, etc. The exact proportions were determined. The next step was the mixing of the various hormones of adrenal and pituitary glands in correct amounts. Isotopes of certain elements were procured, and other chemical properties were adjusted. At last it was ready—the solution which would nourish the young foetus in an artificial uterus. A little starch was added to stiffen the umbilical cord. *The Bagatelle* lay waiting for its children.

As he finished his brief account of the long months of labour and of yearning, Dr. Felix made ready to show the finished product: young cats still "unborn."

We bent over the tank, watching the sluggish yet somehow lovely movement below. Dr. Felix gently seized a cord and drew it through the fluid to our side of the tank. Then, placing his hand beneath the surface of the liquid in order to support the spine, he quietly lifted out a wet, furry little body curled in the uterine position with eyes closed and features composed. We gazed in awe at this small yet perfect creation. Suddenly, I noticed that the kitten was not breathing.

"Dr. Felix," I cried, "the little fellow does not respi-

rate. Should you not spank him to facilitate this necessary process?"

"Ah," said Dr. Felix in a pleased way. He returned the young cat to its habitat before he turned to explain. "There you have touched upon the first barrier to the successful creating of 'life'. But from passing, or, 'breaking through', as we scientists say, this barrier, I gained an added marvel to supplement my method. Do you hear the humming sort of sound coming from that engine beneath *The Bagatelle*?"

"Indeed, I do," I answered eagerly, "and for some time I have been anxious to inquire about its relationship to this pseudo-uterus."

"The intricacies of that machine must be kept a secret until I have secured the patent, for without its use, success would never have come. I may tell you, however, that it is an oxygen machine, built to my specifications by an old watch-cleaner of my acquaintance, who was not told the purpose of his work. The design is an extension of the principles of the artificial lung, and its function is the pumping of oxygen by certain means into the amniotic fluid, whence it is distributed evenly, and, eventually, absorbed by the foetus with the other incretions necessary to natural growth and maturation. Thus, the foetus does not 'breathe', as we do, and

the lungs lie quiescent until needed. Once used, of course, the process of 'breathing' through the lungs must continue, or life soon becomes extinct."

"So much for the oxygen intake," I said, "but how is the carbon dioxide eliminated, Doctor?"

"Umbilical cord," he explained, "same principle as a leaky gas-pipe."

"And what is the other effect of which you spoke?"

"Possibly you noticed," said Dr. Felix, "that although the kitten did not 'breathe' when brought into the air, he was returned unharmed to continue his dreaming existence in the amniotic fluid."

"I did, indeed," I replied quickly, "yet ceased to wonder as soon as you explained the oxygen machine beneath *The Bagatelle*."

"Imbecile!" muttered the great scientist, yet with a certain tolerance seeping out, concurrent with the expressed contempt, "you missed the entire point of the illustration. Did you not observe that the young cat had developed far beyond the normal period of gestation?"

"So it had!" I cried, "amazing!"

"Not at all," replied Dr. Felix modestly, but I could see that he was pleased by my wholehearted admiration, "this was one of the ideals which motivated my initial attempt, and which served as

a stimulant during the entire course of the project. To be brief, why should all the young be brought forth after the same period of dwelling in the womb? Infants are thrust into the world, helpless and fearful, whether they are psychologically ready to step forth into the light of day, or are casting a desperate backward glance at the twilight of security: 'standing with reluctant feet, where the brook and river meet—'."

"Yes, yes," I said quickly, "but how is this prolonged prenatal life managed?"

"'Prenatal' is a misuse of the word," explained Dr. Felix, "these cats are not 'born' in the customary sense of the word. They are simply lifted from *The Bagatelle* and awakened. Think what this means, Blackie! It nullifies the danger of birth injuries, traumatic experiences which burrow into the subconscious, and eliminates the perils of the first few months of life, during which time infant mortality reaches its highest figure."

"Amazing and have you permanently activated any of the sleeping cats?"

"Several," answered Dr. Felix, "I took them to the Creche in the dead of night, and they were adopted the next day. Word was not given out to the Press. It is my belief that inquiries are being made by the authorities. Birth and reproduction are

rare enough to become a government monopoly."

"Let us awaken one of the sleepers now," I begged, "I am most interested in seeing its youthful reaction to the strange world of 'real' life."

"Very well," said the doctor, "but I myself must choose the specimen which has matured sufficiently."

He hovered over the tank thoughtfully and selected a cat. It was drawn up softly and placed, dripping wet, upon a delivery table by the window. After patting it dry with a sponge, Dr. Felix poked the tiny ribcage in a rhythmical series of movements, chanting softly, "one, two, three, four." After about five minutes, the lungs of the kitten took up the rhythm, breathing in and out without medical attention. Next, the tiny paws uncurled from under the chin and the blue eyes opened and looked about. The doctor seized a pair of surgical scissors, trimmed the umbilical cord down to 1/6 of an inch, swabbed the area with alcohol, and pressed a band-aid over the navel. The kitten stretched and relaxed, testing its newly acquired power of independent motion, and then stood up to wobble beneath our reverent heads. He licked his fur with a pink tongue.

"Not from afar," whispered the old professor in estatic tones, "'and not in utter nakedness, but trailing

clouds of glory do we come'."

We found five more kittens at the proper stage for birthing, and awakened them in rapid succession. They frisked about on the delivery table and uttered small cries which sent the good doctor into transports of delight.

Later that night, when the city slept in its childlessness, we set out for the Creche with the kittens carefully wrapped in flannel against the cold. Placing the basket by the door, we rang three times, and ran back to the professor's study. The kindly scientist was chuckling with pleasure all the way home. Little did we foresee the psychological repercussions of that abandonment!

I slept late the next morning and arrived at the office around noon. The staff of *The Yowl* seethed in a condition of the highest excitement. Word of the new "births" had been announced by the government, and rumors were spreading that an unknown scientist had discovered the secret for himself in order to sell young lifeforms at prices that only the wealthiest could pay. Hysteria mounted, and the streets became crammed with gesticulating citizens. I rushed posthaste to the professor's house, following the tailend of a mob which shouted the name, "Thomas Felix," as it surged through the byways.

The frenzied mob was battering the door of the mansion, but it held firm. Through the cries of "anathema!" and "dictator!" could be heard the brave voice of old Dr. Felix, trying to quell the uneasy spirits of the rabble. Finally, the police force arrived, and just in time, for the catcalls and jeers were sounding more dangerous by the second. The police knocked on the door, were admitted at once by Old Tabitha when she recognized the uniforms through the peephole, and the crowd became less rowdy. They were not hoodlums and ruffians at heart, but law-abiding citizens.

After a few minutes the door opened again. The police appeared with the great scientist, Thomas Felix, who proudly indicated that he was going to speak. The citizens were shushed and the reporters, including myself, put pencil to notebook. Everyone has read that speech in *The Yowl* under my by-line; everyone knows of the amazement and reverence with which the eager millions heard the professor's cold, hard facts about reproduction. Dr. Felix announced with simple dignity that each of us could make cats in his own home. The method was old-fashioned but practically fool-proof.

"I do not want wealth from my discoveries," were the concluding syllables, "but

fame, that fame which is given to the benefactor of the race—the highest reward of an individual.”

The crowd, which had listened with increasing faith to the professor's thesis, now applauded wildly. The police and Old Tabitha were passing with tea and small cookies among those who had come to jeer but remained to cheer, as I left for my office to write an account of that evening which has become history. As I finished the story and submitted it to the editor, I came to the decision which has changed my life. I went into the next room and proposed to Moll Gray, the fashion editor. She, too, was overcome by delirium and happiness; she accepted me on the spot. We were married the next day, and, I can truly say, have lived happily ever after.

One afternoon we had just finished making a cat, when

Moll suggested that we invite Dr. Felix over for dinner. He accepted when I called, for we were the best friends he had these days. So great was his reputation that social intercourse was impossible—everyone was awed by Thomas Felix, benefactor and scientist. When he arrived and had settled down for a drink before the fire, we told him our news. We had made a cat and intended to name him after our friend. The old doctor's eyes filled with decorous tears and his noble smile is the pleasantest recollection of my lifetime.

“My first godson!” he exclaimed, “well, well. Little Thomas Felix!”

The greatest scientist in our history stroked his whiskers with a gray paw and twitched his tail in simple contentment, as he gazed at the blazing fire and envisioned the never-ending future of our race.

THE WILLINSKI-ORR SNOOPER

Martin I. Willinski and Mrs. Elsie Orr, research engineers with Rocketdyne, a North American Aviation division, recently outlined plans for a fleet of unmanned ships that could be sent into space in advance of our sending up manned starships.

In contrast to rockets, the Willinski-Orr “snooper” would be small (it would weigh only 1½ tons) and would be propelled by an ion engine. (Rocket engines are generally chemically propelled.)

The classical concept of a space-ship, the two engineers pointed out, usually calls for considerable outlays. Their own ship, unmanned, could be shot into space where it would then circle another planet (satellite fashion) for a year or longer at much less cost.

shapes in the sky

by *CIVILIAN SAUCER
INTELLIGENCE*

The robots that man has created also see and report UFOs. Time and time again radar sights them.

SOMETIMES, even after ten years of UFOs, you still meet a person who "doesn't believe in flying saucers." What can you say to such a person? Name the eminent authorities who have looked at the evidence and said it can't be explained away? He'll demote them from experts to amateurs. Describe observations by pilots, astronomers, military men, technicians? "They were fooled by ordinary sky objects." (*What ordinary sky objects?* Well, he doesn't feel it's incumbent on him to explain each and every natural phenomenon that credulous folks may twist into a "flying saucer.") In fact, a person like this is completely immune to *any sort of visual testimony at all*. He has to be, or he couldn't hang on so credulously to his incredulity.

And it's no use appealing to the evidence of other senses—*sounds* or *odors* from saucers. (F.U., November and January.) Anyone who isn't impressed by the massed testimony of man's master sense, sight, certainly isn't going to let himself believe the reports of the lesser ones either.

Offer him "*physical evidence*"—angel hair? (F.U.,

The Research Section of CSI turns to the evidence for the existence of UFOs furnished by the senses that man has built for himself, in their latest column on UFO sightings, written specially for FU. CSI, widely known research group, has an extensive file of material on this subject.

July and September.) No, no, that doesn't suit him either—angel hair usually evaporates, so he will take care to demand that any "acceptable" evidence be non-volatile.

But man now has more than the traditional five senses—and we don't mean the "sixth sense" of ESP. We mean the new senses that man has built for himself in the last century: the robots that see and feel on the electromagnetic frequency bands that his own senses cannot detect—ultraviolet and infrared light, radio waves and high-energy ionizing radiation. And of these, radar, probing the sky with its staccato spotlight of microwaves, is the new sense that gives us the most information. It is not limited, as the radio telescope and the Geiger counter are, to detecting only "luminous" bodies—that is, bodies that are themselves giving out signals: it bumps up against anything solid that's there. So, if a UFO is in the sky, radar ought to catch it.

Of course, it *does*; and this is what should be pointed out to the die-hard skeptic who has argued himself into disbelieving his own eyes and ears. He may find it a bit of a puzzle to teach himself to disbelieve in radar, too. It's obvious that an ordinary citizen is simply not competent to scoff at the validity of something as technical as a radar return; he has to rely

on the experts, and unfortunately for our skeptic, the experts don't scoff. They say the returns come from something unknown in the sky.

"Project Blue Book Special Report #14" is the only Air Force report on flying saucers that has ever been made publicly available.¹ What this official report has to say about radar evidence is interesting; it is like Sherlock Holmes' "curious incident of the dog in the nighttime." On page 77 we read:

"All but twenty of the UNKNOWNNS were classified as such solely because they were reported to have performed maneuvers that could not be ascribed to any known objects... With the exception of some radar sightings, all of these maneuvers were observed visually. The possibilities for inaccuracies (in a visual observation) are great, because of the inability of an observer to estimate visually size, distance, and speed. Reports of sightings by radar usually were of highspeed objects, some at extremely high altitudes. Some were identified as UNKNOWNNS because there was no object to be seen visually at the point indicated by the radar set. It cannot be said with

¹ Thanks to the explicit assistance of Rep. John E. Moss, Jr.'s Subcommittee on Government Information and through the persistent efforts of Dr. Leon Davidson of 84 Prospect Street, White Plains, N. Y., who published a photo-offset edition at his own expense. It is available from Dr. Davidson for \$1.50.

any assurance what these radar sightings mean, but the most logical explanation is that they are ground targets reflected by an atmospheric temperature inversion layer. *The validity of this statement cannot be established.* It is felt that radar sightings in this study are of no significance whatsoever unless a visual sighting of the object also is made."

This is the only reference to radar anywhere in the 313-page report. There are 240 tables that seem to present every possible detail about UFOs (including such an absurdity as the number that were "luminous black"). But *there is not a single table giving radar data.* As the report itself says, such data are superior to visual observations in an extremely important respect: *size, distance, and speed,* hard to estimate from a visual observation, are recorded unequivocally by radar. Not only does the report leave out all the interesting cases in which radar saw what the eye did not (dismissing them as "of no significance whatsoever"). Worse, it even omits all cases in which the eye and radar did confirm each other. These cases are never cited at all, not even in the decent anonymity of a statistical table. One can only speculate as to the significance of this very striking omission.

Incidentally, we notice that the fantastic *maneuvers* of

the objects—the very thing that earned them the "UNKNOWN" classification—maneuvers which in some cases were observed by radar—are likewise *never mentioned* in the report's 240 statistical tables.

Because most of our radar installations are military, most of the radar evidence will never come to the knowledge of the public. This is not mere fancy on our part. Here is an example of the gap between what the Air Force sees and what it tells the public. In mid-1957 we received a letter from a correspondent who is now a radar technician in the Air Force. He said:

"I am now stationed at Orlando Air Force Base, Florida. As you know, one of the big AF missiles, 'Matador,' is being developed and tested here. I was very surprised to observe 'blips' or unexplained objects on our radar screens. We are constantly catching these objects just before launching time. Since all aerial bodies are supposed to be out of the immediate area before launching, many times we are held up due to these unidentified objects on the radar. It would seem natural for them to appear once in a while, but believe me, they are so consistent that we always expect them now. These objects travel at incredible speeds, and demonstrate small degree turns, very uncharac-

teristic of natural aerial objects. No one can explain it."

It seems fair to suppose that Orlando is not the only AF base where UFOs are as pestiferous as mosquitoes. But have the official statements of the Air Force told us anything about this state of affairs?

In fact, the Air Force has as yet not released *any* details of *any* flying-saucer observations made since 1953. Blue Book Report #14, though released late in 1955, was written in 1953, and covered only the period from 1947 through 1952; in other words, by the time the public got this information, it was almost three years old at best.

A few 1953 cases investigated by Blue Book are given in Ruppelt's book, which was published with the Air Force's *nilhil obstat* in 1956. But since 1953, the only flying-saucer information published has been what civilian investigators could discover for themselves.

Here is another example of important radar evidence uncovered by civilians, with no thanks to the Air Force. This item made headlines from Maine to Hawaii on July 12, 1957, as the front-page story in the first issue of *The UFO Investigator*. The *Investigator* is published by the most important saucer research organization in the United States, the National Investigations Committee on Aerial

Phenomena (NICAP).² The account is as follows.

Just before midnight on March 23, 1957, CAA control-tower radar operators at an airport southeast of Los Angeles suddenly picked up a blip 15 miles northwest of their position and moving away at high speed. When it reached a distance of 40 miles, the "target" abruptly stopped and within three seconds or less completely reversed its direction, proving itself to be no aircraft. Then it about-faced again, and this time continued out of the radar-scope's 50-mile range. About five minutes later, two more targets traveled across the scope. The CAA operators computed their speed: 30 miles in 30 seconds—which is 3600 miles per hour.

At precisely the time that these targets were appearing on CAA radar, visual observations of "a reddish-glowing object darting about" were being made by personnel at Oxnard AFB, the area over which the targets had been tracked; and also by numerous residents in San Gabriel and Pasadena, farther to the east of Oxnard, and in Los Angeles.

The fact that these visual observations were confirmed by radar was not made known at the time. On the contrary: Major Thomas Bowers, Information Services Officer at

² NICAP'S address is 1536 Connecticut Ave., Washington 6, D. C. Membership is \$7.50 per year.

Norton AFB in San Bernardino, queried about the sighting, told the press that "we were not able to pick the object up on radar." Perhaps this was true at Norton; but it certainly was not true elsewhere.

Two 1956 cases are strikingly similar to the Oxnard 1957 case. Both of these 1956 cases, of course, involved civilian radar installations. The first took place in France, at Orly airport outside Paris. At 11 p.m. on February 17, a "blip" twice as large as the blip made by the largest conventional aircraft was picked up by tower radar operators at Orly. It continued to move around on the scope irregularly, sometimes hovering motionless, and showed apparently intelligent behavior. Repeatedly, the blip was seen to follow aircraft taking off or coming in for a landing at Orly and Le Bourget.

The radar men alerted Michael Desavoye, an Air France pilot, as he took off in a DC-3 at 11:55. "A few minutes after take-off," the pilot recounts, "the Orly control tower signaled me that an unidentified object appeared to be heading toward me. We were then about 4,500 feet above Orgival (west of Paris) radio operator and I both saw a little to the right and at about our height, a winking red light, twice the size of a plane's navigation light. Hoping to avoid the ob-

stacle, I changed course. The light disappeared abruptly. I resumed my original course and Orly then announced that the 'machine' was now above me. But this time I saw nothing.

"I cannot explain this phenomenon; I've never seen anything like it. All I can say is that it was not an airplane, and it could not have been a light from the ground, as there was a fog bank beneath us."

The radar target continued to appear on the Orly tower scope until 3 a.m. At one time it was seen to move from Rambouillet to Boissy-St.-Leger, a distance of 19 miles, in 30 seconds—about 2300 miles an hour. The radar apparatus was inspected thoroughly, and was found to be in perfect working order. (*N.Y. Times*, Feb. 20; *N.Y. Herald-Tribune*, Feb 19 & 21; *Paris l'Express*, Feb. 20; *le Figaro* (Paris), Feb. 21.)

At 11:15 a.m. on the morning of November 8, 1956, Pan American radar technician Donald Freestone, at Miami International Airport, was putting a Bendix RDR-1A weather radar through its paces. The antenna was horizontally directed when a strange blip appeared on the scope, 65 miles southwest of Miami (thus approximately over Cape Sable at the southern most tip of Florida) and at an altitude of 7000-8000 feet. It was hourglass-shaped,

and four or five times as large as any airplane. Freestone and six of his PAA colleagues watched the UFO on the radarscope for twenty minutes as it moved rapidly and apparently aimlessly about over the southern Everglades, its distance from the radar station varying between 50 and 70 miles. "It disappeared and reappeared several times," said Freestone, "but I found that by tilting the antenna up, it could be brought back on the screen. The speed was estimated at 550 and 650 miles an hour. One time, though, it was noted that the target moved 20 miles in six sweeps of the antenna, which rotates at 20 rpm. After remaining stationary at 50 miles for two or three minutes, it began going off in the south-southwest direction it had come from. It was last seen about 100 miles from Miami." Freestone added that "it had a definite shape and moved on a definite course, so it is not believed to have been a freak return. I'm convinced that it was something that is out of our experience." (*Miami Herald*, Dec. 13, 1956.)

Twenty miles in eighteen seconds is 4000 miles per hour.

These observations all involved ground-based radar. Radar reports are by no means limited to the ground; many pilots, both commercial and military, have detected

unidentified targets on plane radar and have made visual observations as well. Typical is a recent case reported directly to CSI by a veteran airline pilot.

Piloting Pan American flight #206A from Nassau to New York on March 29, 1957, Captain Ken Brosdal and two of his crew watched a UFO both visually and on radar as it "dogged" them at their own speed, in the same direction, southeast of their plane. At about 7:30 p.m. their position was about 74° West, 30° North; they were flying at 16,000 feet through the tops of cumulus clouds. John Wilbut, the engineer, was in the co-pilot's seat; co-pilot George Jacobson was navigating, and saw the object first. Brosdal wrote us:

"About 50 miles east of Papa 3—a check point between Nassau and Tuna—the co-pilot, engineer and myself saw a very bright white light. It seemed to grow in intensity to the point where it would be about three or four times as bright as Venus rising, and would then subside. This happened three or four times; meanwhile, I 'came to' enough to check the radar screen. Sure enough, a target showed up at 3 o'clock, 45 to 50 miles away, near the edge of the scope. Using the cursor on the face of the radar, I checked with the visual angle.

"The light appeared to be stationary (on the scope), or

moving in a northeast direction, same as us. We watched it visually for about four or five minutes, and on radar for twenty minutes."

Neither the light nor the "blip" had any definite shape. The radar image indicated that the object was larger than conventional aircraft. What impressed Captain Brosdal most was the intensity of the light in its bright phases. After about four cycles of brightening and dimming, the light faded out slowly and completely. Captain Brosdal did not alert the passengers, and apparently no one in the cabin saw it.

In many cases, there has been agreement between ground and airborne radar, plus visual confirmation as well. The jet pilots who have been scrambled to investigate these objects have "locked on" to an unidentified target while both the plane and the UFO were being tracked by ground radar. A typical case of this kind, described in detail by Ruppelt, occurred near Port Huron, Michigan, on the night of July 29, 1952. That evening Selfridge Air Force Base received more than 75 telephone calls from people who had been watching strange objects overhead. At 9:40 p.m., an Air Defense Command radar post in central Michigan picked up a target coming south across Saginaw Bay at 625 miles an hour. Three F-94s were north-

east of the post making practice runs on a B-25; the ground controller contacted one of them and vectored him in toward the target.

When the F-94 was at 20,000 feet, the ground controller told the pilot to turn to the right. Both the pilot and the radar operator of the F-94 saw that they were turning toward a large bluish-white light, "many times larger than a star." In the next second or two, the light "took on a reddish tinge, and slowly began to get smaller, as if it were moving away." Just then the ground controller called and said that the unidentified target had just made a tight 180-degree turn. At the speed the target was traveling, it would have to be a jet if it were an airplane at all, but the turn had been too tight for a jet.

Now the target was heading back north. The F-94 pilot gave the engine full power and cut in the afterburner to give chase. The radar operator in the back seat got a good radar lock-on—"just as solid a lock-on as you get from a B-36." The object was at 4 miles range, and the F-94 was slowly closing in on it.

For 30 seconds they held the lock-on; then, just as the ground controller was telling the pilot that he was closing in, the light became brighter and the object pulled away to break the lock-on. The ground controller asked if the radar

operator still had the lock-on, because on his scope the distance between the two blips had almost doubled in one sweep of the antenna, indicating that the unknown target had almost doubled its speed in a matter of seconds.

The F-94 continued the chase for ten minutes, until its fuel supply ran low. The ground radar showed that each time it got close, the object pulled away again. Some of these bursts of speed by the unidentified target were clocked at up to 1400 miles an hour—by UFO standards, slow. (Ruppelt, p. 226-7.)

The case that Ruppelt considers the strongest in Project Blue Book's records occurred at Rapid City, South Dakota, on August 12, 1953, and was very similar to this Port Huron chase. A UFO, appearing as a bright light in the northeast, was confirmed by radar at Ellsworth AFB as it approached Rapid City, flew once around the town, and returned to the northeast. Two F-84 jets in succession chased this object to the north, but could never approach it closer than three miles. One picked it up on his radar gunsight. The first jet chased the light for 120 miles—completely off the radar scope—but the object followed him back; after the second chase, the UFO flew off toward Fargo, North Dakota, where GOC posts re-

ported it as a fast-moving bluish-white light. Details are given on pp. 302-306 of Ruppelt's book.

The highest speed on record was clocked by airborne radar on a B-29 bomber piloted by Capt. John Harter, while the B-29 was flying over the Gulf of Mexico just before dawn on December 6, 1952. At 5:25 a.m. a blip raced across the bomber's three radar scopes at the unprecedented speed of 5200 miles per hour, to be followed immediately by several others all approaching the aircraft from dead ahead on a near-collision course. One of these, appearing as a blue-white light, was actually seen by the flight engineer as it rushed past the plane. After a few minutes' pause, another group appeared and flung itself past the B-29; two of these were visually confirmed. Five of them were then seen by the thunderstruck radar watchers to come up from behind, turn and rush straight at the bomber from a distance of forty-miles—a gap it would take them only thirty seconds to close. Abruptly, they stopped, and for ten seconds followed the plane at its own snail-like pace; then, resuming their original speed, they swerved away, and all five *crashed directly* into an enormous blip—a half-inch crescent—which had just appeared on the scope. The huge object in-

stantly took off, and was out of radar range within a few seconds.

The velocity at which this giant UFO departed was between 9000 and 10,000 miles per hour.

This report was released to Keyhoe in January, 1953—one of the last that the Air Force ever made public—and it is given on pp. 161-165 of his *Flying Saucers From Outer Space*.

These cases illustrate what the Blue Book authors meant by their vague statement that radar observations “usually were of high-speed objects.”

None of these high-speed radar UFOs could have been a *meteor*. Apart from the maneuvers performed, they were all *too slow*. Meteors travel at satellite velocity—18,000 mph—or better.

All of these incidents occurred at night, and when the UFOs causing the radar returns were seen at all, they were seen only as lights, or luminous bodies of indistinct shape. Unfortunately, this is typical of radar sightings. A few cases are known, however (and there are probably others in ATIC files), in which something more concrete than a light showed itself to the eye. For example:

On August 1, 1952, about an hour before dawn, an Air Defense Command radar station outside of Yaak, Montana, on the extreme northern border of the United States,

began to pick up unidentified targets. The three radar men looked outside, and saw two colored lights in the direction indicated. Until dawn, lights were visible in the sky and as blips on the scope. For the first half hour the lights were red, green, and blue; thereafter they remained yellow. No more than two were seen at one time. They moved erratically, sometimes hovering motionless; when they dived, “they appeared to develop long, white vapor trails.” The same movements visible to the eye were observed on the radar screen, which also revealed that the objects were at a great distance—fifty to eighty miles away. Their angular elevation was not given by the radar, but was seen visually to be about 20-40° above the horizon—implying *an altitude of forty or fifty miles*.

But the most unusual feature of this sighting was that it continued until after dawn. One white light “went out” as it changed direction, and was then seen to continue as a *dark, cigar-shaped object*, silhouetted against the brightness of the morning sky. Shortly afterwards, the UFOs disappeared. (Ruppelt, pp. 255-6; J.S. Hynek, *Jour. Optical Soc. of Amer.* 43 (1953), 313.)

On July 11, 1950, occurred one of the few cases in our records in which a definite shape was seen with a radar

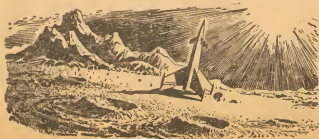
confirmation. According to the UP account (N.Y. Post, July 12), the object was seen "last night," but the description sounds as though the sun had been shining. Pilots R. E. Moore and J. W. Martin, from Millington Naval Air Station near Memphis, Tennessee, were flying slow training planes about ten miles away on their left. "At first we thought it was a jet, distorted by glare off the aluminum body," said Martin. But as the object crossed in front of them at a distance of only one mile, they got a better look at it. It was domed on top, "like a World War I helmet seen from the side, or a shiny shallow bowl turned upside down. I think it would be about 25-45 feet across and about seven feet high," said Moore. They tried to follow it, but could not keep up with its speed, which they estimat-

ed as 200 miles an hour. It was in view for about three minutes before disappearing in the distance.

With Moore was Electronics Technician G. D. Wehner, operating the radar equipment. "I caught it on the radar scope," said Wehner. "It was helmet-shaped. The outline of the edges was all right, but glare from the center of it prevented getting a better look."

In our next article we shall discuss radar "angels,"; the famous 1952 radar sightings over Washington, D.C. (which created a nation-wide uproar); the Air Force's remarkable "explanation" for these sightings; and radar "explanations" in general, with special reference to the little-known, extremely interesting report on radar sightings issued by the CAA in December, 1952.

A CORRECTION.—In the January issue, we placed the brig VICTORIA at Long. 30°44'56" E., in the Gulf of Adalia. Unfortunately, reconsultation of the original reference (ATHENAEUM, #1086 (1818), p. 833) has shipwrecked this attempt at relocating her. Her position—correctly given by Fort—was northwest of Malta, at Lat. 36°40'56" N.; Long. 13°44'36" E., when she saw three luminous bodies issue from the sea near her. From the original accounts, it appears questionable whether the sky phenomena reported that evening from Adalia and Mt. Lebanon, a thousand miles to the east, can properly be identified with the objects seen by the VICTORIA.



universe in books

by HANS STEFAN
SANTESSON

Recent novels and books of interest to SF readers, and a discussion of the vanished sense of wonder in fandom.

C. L. Moore's DOOMSDAY MORNING (Double-day, \$2.95) is a tense and effectively told novel of conspiracy and revolution in a not too distant future.

Andrew Raleigh had founded C O M U S—*Communications of the United States*—and now Raleigh and the system he had created in the days following the Five Days War both faced death. The survival of Raleigh's successors depends upon their continued rigid control of all means of communications, the rebels in California representing a menace to this company police state. And Howard Rohan, at one time—before he cracked—hailed as the greatest actor in the United States, plays a leading role in these events. Recommended.

I discussed, some months back, Robert Silverberg's interesting 13th IMMORTAL (Ace Books, 35 cents) and wrote that I felt that here was a description of a world which came to life before your eyes with a vividness and an effectiveness which was testimony to the professional competence of this young writer.

As announced recently, this column will appear more regularly in the future, bringing you comments—enthusiastic and less enthusiastic—on books which may interest you, and further comments, not always gentle, which may interest some of you aficionados. Correspondence is invited.

And now I find myself saying the same thing about his **MASTER OF LIFE AND DEATH** (Ace Books, 35 cents). I do not agree with Harlan Ellison that this is the better book, either thematically or from the writing standpoint, but it *is* a competently handled report on a world where the supra-national Bureau of Population Equalization is needed. It is perhaps a grimmer, more authoritarian, and perhaps an even more probable society that is described in this second novel, with the people riding the tiger that is this society handled well. I must admit that I personally liked 13th **IMMORTAL** more (perhaps it's the hidden romanticist in me!) but both are illustrations of why Silverberg, within the space of a few years, has attained considerable prominence in this field. James White's interesting **THE SECRET VISITORS** is the companion novel in this Ace Double Novel book.

G. Harry Stine's extremely interesting **EARTH SATELLITES AND THE RACE FOR SPACE SUPERIORITY** (Ace Books, 35 cents) has been described as a "workable plan for the conquest of space in the next decade." Be that as it may, it is an authoritative paperback on the earth satellite by a rocket engineer who has worked with the planning staff at the White

Sands Proving Grounds and participated in hundreds of rocket firings. Mr. Stine, as Lee Correy, is well known in the SF field.

Talking of satellites, two years ago Field Marshal Viscount Montgomery made a statement in the course of a lecture which is rather appropriate today.

"Let us take a glance at the future," he said. "I consider that this lies in the hands of the men of science."

"Today some of us may feel we are living in the era of ultimate weapons. I suggest we are really in a transition period. There is much more to come. Within the next five years the guided missile will be with us. Within the next ten years there will be an operational, inter-continental ballistic rocket carrying a nuclear warhead. Shortly after the ballistic rocket will come the unarmed satellite."

"I read recently in a newspaper a statement by a scientist that there is no sound military requirement for this device. I disagree profoundly."

"The military requirement is that a large unmanned satellite could contain television, photographic and communication equipment. It could televise pictures of world-wide cloud formations, thus allowing the continuous location of storm centres and areas of good weather."

"The satellite could look down on any desired area several times in each twenty-four hours. The information thus gained would depend on the state of development of radar, visual optics and television technology. The pictures taken would be automatically developed and sent back to earth by radio."

While a British Field Marshal is found to have the imagination and the awareness of what Tomorrow may be like hitherto attributed to Science Fiction, SF fandom itself appears to be suffering from a case of the hardening of the intellectual arteries. There are times when one is actually dismayed by the intellectual rigidity and cultist approach to Science Fiction of many otherwise charming and pleasant people. Consider, for instance, the reactions of some fans to what are described as the pseudo-Fortean maunderings of Civilian Saucer Intelligence.

You may remember that I wrote recently that I felt the lines were becoming more sharply drawn between the men and the women who see in Ufology an intellectual challenge in an age and in a world where surprisingly few secrets seem left for us to either explain or theorize about and those who, on the other hand, interpret, often mystically, sightings and alleged contacts with extra-terrestrials. While I happen

to personally agree with those who feel that there is a disturbing pattern to these contact cases, failure to accept these stories should not imply blanket intellectual rejection of the possibility of a more credible variant of these alleged visitations, and blanket rejection would also be to likewise ignore some rather healthy chunks of near-history.

I believe many of us are agreed that Science, in this last decade, has caught up with Science Fiction. Within our lifetime—and increasingly so in recent years—we have come to learn more and more about this earth we live in, about the universe surrounding us and about the Space we are now beginning to penetrate. We have no right to at this point blithely assume that the world will somehow stand still and that in our time, or in our children's time, we will not learn still more about the Universe around us and what may exist in or dominate the Universe.

Our frontiers as a nation are hard enough to define in these days of shrinking distances—the frontiers of our mind should not lag behind this reality at a time when, with sputnik launched, there is talk of larger satellites manned by human beings, and expeditions to the Moon, Mars and Venus, within the next decade. As for the CSI

columns (the criticism of which in the *Seattle Cry of the Nameless* prompted this digression) they are perhaps not deathless prose, but they are intended for people who still have a little of that "sense of wonder," that curiosity about both yesterday and tomorrow, so much a feature of the Science Fiction which you and I both knew.....

But to turn again to books, —a subaquatic atomic bomb is detonated far beneath the waters of the South Pacific and a strange army of metallic monsters, thrown up from deep underneath the Pacific, move rapidly across the ocean towards the California coast in Henry K. Gayle's curious *SPAWN OF THE VORTEX* (Comet Press, \$3.).

It is impossible to adequately describe Kenneth Heuer's *THE NEXT 50 BILLION YEARS* (Viking Press, \$3.), illustrated with eight paintings by Chesley Bonnestel which could very well be photographs made by the author, a Fellow of the Royal Astronomical Society. Originally published in 1953 as *THE END OF THE WORLD: A SCIENTIFIC ENQUIRY*, the book's aim is to give a rational realization of the danger of atomic war. The man-made possibility of this end is placed, in the present version, within the context of astronomical the-

ories describing possible cosmic catastrophes up to the year 50,000,000,000 A.D.

David Duncan will be remembered for his interesting novel, *BEYOND EDEN* (Ballantine, 35 cents) probes into the impact of science upon our society in these days, the novel ranging from this morning's military headlines to a vision—an interesting vision—of a world which lies just beyond the veil of time.

EARTH IS ROOM ENOUGH, by Isaac Asimov (Doubleday, \$2.95) is a group of fifteen of his always excellent short stories, varying from the possibilities of a machine that views the past to a vignette describing the first super-slow-motion film of an atomic explosion. Recommended.

Finally, Ace has published an abridged version of A. E. Van Vogt's *EMPIRE OF THE ATOM* (Ace Books, 35 cents) originally published by Shasta Publishers in Chicago, which this column, some time back, described as an interesting study of a group of very human and credible people, cast against the background of a latterday Galactic Renaissance. Frank Belknap Long's *SPACE STATION 1*, the companion novel, will be welcomed by the many who like Frank Long's work.

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**saucers -
fact
not
fiction**

by MORRIS K. JESSUP

How much substance is there
to the attacks on Ufology?
A distinguished researcher
replies to recent critics.

A DEBUNKER is one who debunks—or, at least he is supposed to try—but very often it seems that a debunker has to spread himself too thin, just in order to keep on writing. Such seems to be the case of a somewhat frustrated and bemused character whose by-line reads, Lester del Rey, writing in the August 1957 issue of FANTASTIC UNIVERSE.

It may be that the only element, in the field of Ufology, worse than blind adoration and unadulterated *will-to-believe*, is the professional determination not to accept any evidence at all. The first seems misguided but sincere. The second reeks of phony arrogance and flippancy, and takes on the characteristics of winning arguments at the expense of seeking truth.

The antipathy of the Science Fiction hodgepodge toward Flying Saucers is both ludicrous and laughable. Flying Saucers, a part of a broad phenomenon more properly called UFO or Unidentified Flying Objects, have pulled an ephemeral rug from under a cult—a cult which has taken an erstwhile interesting and

While we do not agree with some of the statements in the above article, we are nevertheless happy to welcome Morris K. Jessup, explorer and UFOlogist, who makes a first appearance in these pages. He is the author of the recent THE EXPANDING CASE FOR UFO (Citadel).

productive field of literature and debauched it into a monomolecular coating of pseudoscience painted onto a thick and murky base of cheap sex; and the whole smeared almost obscenely over an artificial background of imaginary and misunderstood space lore. (*Obviously not F. U.!— Editor*)

By simply demonstrating a factual condition more astounding than S-F, Ufology is essentially depriving S-F of almost everything except its morbid sexology. The screams you hear from time to time are those of anguish from the ensuing vacuum.

Of course, del Rey is partially correct—a would-be debunker has to be partly correct, some of the time. The mere fact that a well known Science Fiction club found it expedient to hold a symposium on Flying Saucers is doubly indicative: UFO's have hit S-F with an impact too solid to be ignored, and SF'ers have failed to understand that UFO's are... **FACT, NOT FICTION.**

No doubt but that L. Sprague de Camp (brought in as heavy artillery) is amongst the heaviest ordinance available to the retreating but embattled SF'ers, who are as die-hard as the dogmatized scientists. De Camp is a smart and learned man, as witnessed by his *magnum opus* of debunkery: *Lost Continents* (Gnome Press, N. Y.).

His mental adroitness is excelled only by his superb erudition and effulgent personality, but even a de Camp is hardly going to stem a tide which has had a steady, if unobtrusive, flow for several millenia and has reached flood-tide only within the past decade.

True, del Rey rubs salt into some sore spots, and we squirm a bit. His scathing sarcasm anent the (pseudo) "scientific" attitudes of Saucer Observers is not without some justification. Further dissecting would reveal that even more damage has been done by metaphysical skull-duggery and telegadding in sprightly hops from planet to planet. No wonder the SF'ers are jealous for, even at their clumsy worst, they hadn't the termerity to claim personal experiences of such appalling brazenness (except in extremely unfortunate examples such as the Shaver mystery.)

Del Rey makes the mistake of not distinguishing the voluminous smoke from the (sometimes meager) fire. Nor does he recognize the drastic dividing line between the conservatives in Ufology as opposed to the hoaxers, the pranksters and the dedicated deep-enders.

By influence and inuendo, del Rey tries to invoke a disbelief in ghosts to bolster up his tirade. Not only is the mention of ghosts impertinent in the discussion, but he

entirely overlooks the fact that ghosts are a scientifically recognized phenomenon. This may pass as an adroit maneuver, but only to very casual readers who haven't taken the time to study the literature of psychic research. Such an inversion of facts, for the purpose of merely winning arguments, is in about the same category of intellectual chicanery as Menzel's mendacious attempts at disproof by default, and by discussing, as a diversionary measure, everything in the world but the subject at hand. Yet, giving the devil his due, the teleporters and metaphysical hoaxers have undoubtedly given del Rey an opening. They have let down the guard of the Ufologists and have muddied the waters in a very serious manner.

His arguments are all of a negative, or default, character. We may as well say that I *might* have been born a Hottentot, but since I was not born a Hottentot I wasn't born at all. I'm reminded of an experience of an Astronomer friend of mine who was driving through traffic in a large city when he was whistled to a shuddering halt by a traffic cop. The cop said: "Why didn't you stop for that traffic light?" Friend said: "I did stop." Cop said: "Well, I didn't see you stop." And my Astronomer friend replied: "Well, within a block of this spot, I can find at least 500

who *didn't* see me stop, but right here in the seat with me is *one* who *did* see me stop." Throughout the hundreds of years in which Ufological data have been reported, pertinent phenomena have been vehemently denied by "experts" who were nowhere near the event. Their negative pooh-poohing has often been given greater weight than the definite and positive observations of intelligent, on-the-ground witnesses.

In several different headquarters in Washington, D.C., Government and Civilian alike, there is a steadily growing documentation of encounters of aircraft with UFO; not necessarily collisions, but tangible enough to constitute proof. In denying the evidence of *all* observers, del Rey would deny the use of eye-witness evidence in courts of law, or in any scientific work not reproducible by experimentation... If observational data is to be excluded, the whole science of Astronomy should be rejected as unprovable because we cannot reproduce extra-galactic nebulae at will.

Del Rey's bland assumption that the Flying Saucers must expend tremendous amounts of energy to get here is spacious and gratuitous. Such a statement is inconsistent with his own contentions as to their nature and origin. Until we know their origin and their sources of power and

propulsion, such statements are worse than idle speculation. The UFO may well be indigenous to the Earth-Moon system, and their power may be as cheap and ubiquitous as the wind which propels sailing ships. Why does *he* insist on theorizing, while scolding the Ufologist for the same indulgence?

He makes some left-handed remarks about the "theories" of Ufologists. All theories are debatable when taken in the sense of being hypotheses, and certainly hypotheses in such an embryonic field as Ufology are extremely debatable. But—to infer that sightings are theories is to deliberately confuse the issue. When a man says that he saw something, he is not hypothecating...he is reporting.

One of the best examples of such confusion and maladjusted logic comes from the recalcitrant Astronomers, themselves. During the 17th, 18th and 19th Centuries, there were dozens of observations of spherical objects moving across the visible disc of the Sun. They were seen, clocked, measured and documented by professionals, amateurs and laymen. They were real enough for the very top echelon of mathematical astronomers to take them seriously; to consider them as planets; and to calculate orbits for them, supposedly lying inside the Orbit of Mercury. Yet—there are no major planets

within the orbit of Mercury. The caustic and brilliantly analytical astronomer, C.H.F. Peters, took the data and demolished the idea of an intra-Mercurial planet with devastating clarity. Then he made the classic mistake that is perpetuated by the Menzels, the de Camps and the del Reys; he dogmatically said, in effect, "Since there are no intra-Mercurial planets, then no valid observations were made and all of these dozens of trained observers are either lying or, at least, unreliable. Nothing could have been seen because there was nothing there to be seen." In the early 19th Century, the same volley of fire was turned on meteorites, with as much justification, and you know what has followed. The facts are, clearly, that many an Astronomer of honesty and ability saw UFO passing across the Sun and reported his sightings. The brash calculation of orbits was theory, based on the mistaken hypothesis that the observed discs or spheres were planets comparable to such globes as Mercury and Mars. The hypothesis was finally proven invalid, but the sightings, like UFO sightings of today, remain as concrete evidence, too prolific and well documented to be doubted. Nothing but dirigible UFO, operating in space, can explain their existence. Orbits are theoretical, but observed bodies make data.

So, let's be tolerant with the hypotheses of the Ufologists. Theorizing is a more or less harmless indoor sport. Observations, when honest, are UFO of another tint. Astronomy is entirely based on observation and the early days of that science, in all its phases, were days of controversy. Yet, the observations of astronomy still stand. Those of the hypothecated planet, Vulcan, are as valid today as they were a hundred years or so ago. Those observations are as valid as observations of those classes of celestial phenomena which are repetitive or periodic. They were rejected to a considerable degree because they were not cyclic or periodic, for Astronomy is intolerant of non-repetitive phenomena.

In brief, the field of Ufology cannot be fairly judged on the basis of the hypotheses, often called theories, which spring from it.

PERHAPS the greatest damage to Ufology has been done by its best friends, who continually attempt "explanations." Some of the best writers fall into this trap, and perhaps I am also guilty even though I try to make clear that I am merely offering possibilities for consideration. Ufology is still in the observational stages. Explanations of the nature of UFO, their intelligent direction or control, and their mode of

power and propulsion should await a more careful tabulation of data and its segregation into suitable categories. In this we must agree with del Rey.

Yet, such is the nature of our citizenry that most of us demand something sensational if we are to maintain interest. Our public press sees to that. Without the hoaxers and pranksters, public interest might have died long ago ... died back to the state of indifference which existed prior to 1947 and Kenneth Arnold. Certainly, Government, Press and Science Fiction did their joint best to smother the interest.

Del Rey has another point of course, when he says that Ufology should weed out the trash and present the remainder in some intelligible form. This is what is being attempted by many agencies; but before weeding-out can be done, it is necessary to assemble and classify all data and all reports. Out-of-hand rejection is not a legitimate way of going about the task, and would smack too much of just the type of unreasoning dogma to which the Ufologist objects. Some culling will eventually have to be done.

During the past three years or so, there has been somewhat of an exodus of the deep-enders from Ufology. Starting rather early in 1956, on the other hand, there has been a revival of interest

among professional and educated people, who have either seen UFO phenomena or have what they consider to be reliable evidence. This sane and serious interest is reaching substantial proportions; and it is spontaneous, for there has been no build-up in the press or on radio and TV. Any lecturer in Ufology will confirm this.

Evidence *for* the UFO is all of a positive nature, be it direct observation or merely supporting conditions or events. The objections of the dogmaticists, however, are purely negative and contain no evidence at all. The objectors who have neither observation nor experience merely say that UFO phenomena could not happen and therefore didn't—the same attitude taken by C.H.F. Peters regarding the observations which were purported to be of an intra-Mercurial planet.

THE PRESENT status of Ufology is this:

There is serious interest in space phenomena, among a large sector of our population and, significantly enough, it is quite noticeable among ministers, lawyers, doctors and successful commercial people. These groups are taking an objective and open-minded view of a puzzling phenomenon. Serious and determined investigators are at work all over the country, and a large majority of them are

working intelligently and at the same time trying to eliminate "fringe" elements from UFO reports and writing. Such organizations include CSI (Civilian Saucer Intelligence) of New York and NICAP (National Investigations Committee on Aerial Phenomena) in Washington, D.C. Many individuals are also working with disciplined enthusiasm, among whom are Max Miller in Los Angeles, Bryant and Helen Reeve in Cleveland, Norman Bean and Norbert Garriety in Miami, and the well known news commentator, Frank Edwards, in Indianapolis. The Government's interest is expanding, rather than declining, and many government intelligence agencies and research groups are looking for UFO answers although most of this activity is going on very quietly. The objective writers in the field of Ufology, such as Ruppelt and Keyhoe, are pushing Ufology as the door to a new concept of our cosmic environment. Scientists and professors are joining ministers and lawyers in affirming the basic observations and the importance of Ufology. Such people are not dogmatic and few of them are crusaders: they do, however, admit the reality of a phenomenon, or group of phenomena, which they do not yet understand.

Offsetting these workers, however, there are still a considerable number of dedicated

enthusiasts who insist on attributing elements of divinity to types of space beings and space people whose existence has not been demonstrated in any obvious manner—much less proved. These attitudes, speculations and beliefs are based largely on metaphysical revelation, or communications through extra-sensory (ESP) channels, and some claim communication via electronic devices of various sorts. Some of them may be true or valid. Many are well intentioned. However, it is seldom, if ever, that any two of the proponents of divinity for space beings come up with the same descriptions or reports, in spite of each individual's claims that he or she is an especially appointed representative or mouthpiece for a space man. The stories of teleportation to other planets do not ring true, and many believe that such tales are the result of S-F influence which may have contaminated the otherwise pristine purity of Ufology.

The advocates of divinity for space people, do however have some background and precedent for their beliefs. The Holy Bible, especially in the Pentateuch or Five Books of Moses and the New Testament, appears to be a long and specific chronicle of what we may call extraterrestrial guidance or extraterrestrial intervention. References to space people, UFO and related

phenomena are legion in the Bible, and it is only natural that a religious nation such as ours should overshadow space characters and events with a cloak of divinity. The dividing line between true divinity and the merely superior traits of space beings is a vague and hazy border which is obviously not very well understood by the more religious devotees of the Flying Saucers.

As Ivan Sanderson pointed out with scintillating barbs of iridescent metaphor, in the February 1957 issue of FANTASTIC UNIVERSE, the Holy Bible is one of the best sources of information on UFO, disrespectfully known in vulgar terms as Flying Saucers. Among other documentation, including the hoary records of the ancient Chinese and the meticulous empagination of the Romans, we must impugn the Holy Bible if we set out to deny all of the multitudinous evidence of UFO on, above or around the Earth, as Sanderson has so vigorously asserted.

Now, there have been a very few thick-skinned individuals who have said that the Holy Bible was fiction, and there have been sacrilegious blatherers who claimed it was *science-fiction*, but, after a careful study of such portions of the Bible as the Pentateuch, or Books of Moses, I am convinced that our Bible is valid historical documentation. *The*

Bible is History! Its writers had the good grace to steer away from hypothesis, or what Mr. del Rey calls theory. Moses, a man of the most advanced wisdom and learning, chose to accept space visitations at their face value, without wasting too much time "explaining" that which he saw but did not comprehend or understand. Like Ufologists of today, the scribes recorded what they saw, with a minimum of description. Unlike many of our Ufological experts, however, they accepted the manifestations of UFO as commonplace and avoided "explanations" and the ensuing controversies. Yet, again like some of our present-day claimants, the Biblical scribes asserted that they communicated with space entities, rode in UFO, received ESP communications; saw and participated in the miracles of aportation, teleportation, and disappearances; listened en masse to voices of space beings emanating from cloud-vehicles, contacted the beings and saw their vehicles. Space beings walked among them, scarcely distinguishable from earth-men. All of this is recorded in our Holy Bible with the casualness of everyday living. The cloud in which "Yahweh" moved about was most obviously a UFO, and it was such a common, everyday part of Israelite life that no scribe felt any compulsion to give it minute de-

scription or to hypothesize on its origin, motive power, nature or purpose. In every respect, reports of UFO today resemble those of Biblical history some 3500 to 6000 years ago.

Melchizedec: "...without father, without mother, without descent, having neither beginning of days nor end of life; but made like unto the son of God...", was patently a space man. (Hebrews 7:3). We need not rehash the already hackneyed examples such as Ezekiel's wheel or the "power-blast" that carried Elijah away; or the model of a UFO in the courtyard of Solomon's temple. We need not reiterate the story about the fleet of UFO that visited Pharaoh at about the time (according to Egyptian chronicles) of the plagues and the Exodus.

These biblical accounts of space craft, space people, and UFO in general, differ only in terminology from the reports of today. Deny them and you have to deny the authenticity of the Bible. Such a denial *may* be justified by scholars who make an adequate study of the scriptures, but it takes a hardy soul to call the Bible fiction in opposition to the determined belief of the Western World that the Bible is divine truth from cover to cover.

The "glory" of the Lord, for instance, was a bright and extensive effulgence which

was flexible and adaptable enough to fill a room, a temple, or cover a mountain top. Whether or not it could be called a Flying Saucer, it was an UFO, and seems to have been similar to the orange discs of light, or pure energy, so commonly reported today and for hundreds of years in the past.

The "cloud" that clung to the tabernacle of the Israelites, which led them out of Egypt and which guided them round about the Middle East, was clearly an UFO. Specifically, we are told time and again that the Lord rode in this "cloud." Repeatedly the "Lord" spoke from the cloud-vehicle, or used it as a medium of telecommunication. The "cloud" behaved intelligently, as do UFO of today. There are organic appearing clouds in today's skies—I have seen some of them.

WHILE this was being written, there have been several reliable reports of sightings in the Washington D.C., area. A government scientist, a Ph. D., has had two sightings. The first was a spherical object playing tag with one of our best jet planes, over Washington. Its speed was several times that of the jet. His second sighting, on August 5th, 1957, consisted of a formation of seven glowing objects in V-formation, moving northward over Alexandria and Washington. They

looked much like the eight objects seen by William Nash, airline pilot, over Virginia a few years ago. They also looked somewhat like the V-formation of cloud-like objects seen in space, near a great comet, by Astronomer Barnard in 1882. This formation was independently reported by observers from Alexandria, Virginia and in Maryland from Silver Spring, Hagerstown and Baltimore. Are we still to call this mass hallucination?

Shortly prior to that an engagement between two jets and a UFO took place in Illinois, according to Frank Edwards; and both players and spectators at a ball-game stopped to watch the show. Mass hallucination?

Is it coincidence, only, that there was a considerable "flap" of sightings on the West Coast, on the same evening as the Washington-Alexandria-Maryland sightings—a four-hour difference in time making it possible for the objects to be in the two places at about the same clock and sun time?

In today's mail I received an authenticated report of two large chunks of ice falling in the same place—several minutes apart. Not the size or kind carried by airplanes, or formed on plane wings; and *falling in the same spot, minutes apart* is not characteristic of something dropped from a plane, even if a plane

had been observed. In such a case you have perhaps three alternatives: (1) meteoritic ice from space, (2) ice from a fixed source overhead (a la C. Fort), or (3) ice dropped from a hovering UFO. Take your pick—the choice is gratis.

To conclude:

Nobody is mad at Lester del Rey. Everyone to his own

judgment; but judging a Ufologist's hypotheses is one thing, and judging the validity of his observations is quite another. Maybe UFO are not Lester's saucer of tea, just now, but sooner or later a light may break over him and when it does we will welcome him to Ufology in spite of the taint of S-F which now makes his tea a bit murky.

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familiar face

by DON BERRY

Another attack was due soon, another milestone near in the never-ending and so lonely pilgrimage.

"THE PLEASURES of an old man are few," said the Reverend Enoch Cartwright, placing a thin, blue-veined hand on Hans Bjorklund's arm. "But I don't imagine I have to tell you that, eh, Hans?"

"Hardly," smiled Bjorklund, nodding his gray head. "On the other hand, you seem to be amusing yourself well enough in your dotage." He gestured to the hall in which they stood.

It was long, perhaps fifty feet, with tiled floors. The sides of the hall were lined with glass cases from which emerged a continuous undercurrent of sound. Chitterings, squeaking, raucous bird cries, the subdued murmuring of small, furry things. The two old men stood nearly in the center of its length, Enoch Cartwright supporting himself with a cane, Hans Bjorklund standing beside him.

"My menagerie?" said Cartwright. "Not a product of senility, I assure you. I began this collection nearly forty years ago, when I took my first parish. You were gallivanting about Asia, then, as I recall." It was almost a re-

Don Berry writes from the West that his time is divided between such a variety of fields that he is afraid it will not seem credible to our readers. This is of course true of many of the men and women working in this field, as the author would discover if he lived closer to these parts.

proach. Cartwright inclined his bird-like head at Bjorklund. The other man stood half a head taller, and the difference was accentuated by Cartwright's slight stoop, Bjorklund's stiffly erect stance.

"You're not going to twit me about my wanderlust, Enoch, not after all these years?"

"I didn't mean to, Hans," said the small man sincerely. "I truly regret we've seen so little of each other during our lives, but I imagine every man must follow his own destiny. I *am* a bit put out," he added, with mock severity, "that only illness could drive you to visit me."

Bjorklund shrugged, with an easy grace for a man of his years. "Periodic," he said briefly. "I have an attack every so often. It's not serious, but when I felt near another, I thought it would be nice to have a little peace and quiet for a change."

"Whatever the reason, I'm glad you've come," said Cartwright. He began to move slowly down the hall, returning his attention to his menagerie. "As a man of God, retired, I wish to surround myself with God's creatures in my declining years," he said. "That's what I tell the young people who come here. Do you think it sounds too pontifical?"

"Not at all," said Bjorklund. "Quite appropriate for

an old natural philosopher like yourself. Just mystical enough to be interesting."

"Frankly," admitted Cartwright, "I've just always liked animals. I have as many types here as my facilities permit. No lions, however," he added seriously. "I have a distinct prejudice against lions. Ever since I read about Roman circuses, I've had small use for lions."

Bjorklund smiled in appreciation. For all his years, the Reverend Cartwright had never lost his loving grasp of the absurd.

"I think," mused Cartwright, "an old man tends to preoccupy his mind too much with death. I surround myself with life, here. Hans," he added abruptly, "have you ever thought about immortality?"

Bjorklund was strangely shocked by the abrupt question. "I suppose so," he said. "Haven't we all?"

"Would you like to see God's only immortal creature?" Cartwright inclined his head, looking incredibly pixie-ish in the afternoon sun streaming through the skylights.

"Why, I—of course. Very much."

Cartwright led the way to a case no different from the others. The sunlight streamed in, warming the dirt floor of the case. On the floor, lazily coiled, with half-lidded eyes, lay a common garter snake.

Bjorklund laughed, realized he had been holding his stomach muscles tight, as if in protection against a sudden blow.

"You're beyond me this time, you old codger," Bjorklund said. "Riddle me your riddle then, wise man. Why is a snake immortal?"

Cartwright grinned in enormous appreciation of his small victory. "I'll tell you about it," he said. "Shall we go back to the house? I like to let the suspense build a little, and besides, Anne should have tea ready for us."

As they walked toward the small, shrub-engirdled house, Bjorklund thought, not about immortality, but about Anne Cartwright. His friend's daughter was disturbingly attractive. She could not have been more than twenty-five, and yet Bjorklund felt a powerful pull toward her. And the attraction, he knew, was almost purely physical. Her body called to him, her young, nubile body. In a younger man, Bjorklund would have called it lust. Now, he had no name for it.

He tried to put it out of his mind. Even if the age difference were not so great, she was the youngest daughter of Enoch Cartwright, and Enoch was the nearest thing to a friend Bjorklund had ever known, for he was not a man to inspire easy friendship. It had taken him many, many years to learn that, lonely

years of trying to make friends, only to have them shy away with an inexplicable distrust of him. Only Enoch trusted him. It would be a terrible thing to misuse his trust so grossly.

Enoch returned to the subject of immortality when tea had been served. Anne had left the 'old gentlemen' to themselves, and Bjorklund's eyes had involuntarily clung to her as she left the room. He was confused, he thought, he was not thinking clearly at all. Another attack was almost certainly due soon.

"Perhaps a senile pleasure," Enoch was saying, "but I enjoy people's expressions when I ask them if they'd like to see an immortal animal. It shakes some of the stodgy ones up pretty badly.

"There's an almost universal belief among primitive peoples about the snake's immortality. Even the Genesis Garden of Eden story is probably a re-working of earlier legends. Here, I'll show you." He went to the filing cabinet and pulled out one of the drawers.

"My other hobby," he said, thumbing through cards. "Folklore. Natives all over the world believe the snake is immortal, because he sheds his skin. Sumatra, the Celebes, Egypt, British Guiana, nearly everywhere. That was how the Serpent betrayed Adam and Eve. He stole immortality from them. Since

the Serpent alone sheds his skin, he alone lives forever.

"There's an—ah, here it is. The Wabende of East Africa have the most typical legend about it. They say that God, whom they call Leza, came down to Earth one day to talk to all living creatures. Unfortunately, all were asleep except man and the snake. Leza asked, 'Who wishes not to die?' As man stepped forward, the snake slid between his feet and tripped him up. Then he said 'I do,' and Leza granted him immortality."

Bjorklund's forehead felt hot. His hand began to shake until the tea in his cup sloshed from side to side. Enoch was still talking, but Bjorklund heard him only vaguely, as if through a wall.

"...on the condition, of course, that he shed his skin periodically. That is why man and all other creatures die—Hans, what is it?"

"I—I don't—" Bjorklund felt his head swing forward. It had suddenly become an intolerable weight. A red haze drifted across his vision, and he put a hand out to steady himself.

"Anne!" shouted Cartwright, "Anne! Come help me!"

Bjorklund felt his friend's hands under his arms, supporting him, and then a younger pair.

"Get him up to his room," said Enoch's voice, distantly, "and call a doctor."

"No. No doctor, no doctor," mumbled Bjorklund. "I'm—it's all right, I'll be all right." Through a veil like heat waves, he saw stair treads slipping below him, and realized they must be helping him upstairs, though he could no longer feel supporting hands. Then they were gone, and there was the feel of cool sheets beneath his body. His body was hot, so hot!

Dear God, he thought. Not again, not again, please!

His breath escaped in regged, uncontrolled gasps, waves of agony swept through him, tearing at his vitals. Involuntarily, his shoulders snapped forward, with an abrupt shocking suddenness. He felt the age-old, familiar soft 'ping' of tearing as his skin split from the base of his neck to his hips.

The human memory, he thought with sudden clarity, what a vagrant, facile thing it is. They remember our encounters, but warp the memory into myth, twist—

His human consciousness left him, a reflex more ancient than mankind controlled his body. Hands like claws reached to his forehead, to curl beneath the mask of skin already loose. To strip away the husk of an old man, like a dried and useless cocoon, freeing the fresh young flesh within for another thousand unwanted years of loneliness.

insane planet

by THOMAS N. SCORTIA

He activated the anti-grav and shot upwards, the fury of their cries behind him as he vanished in the dark.

THE SHIP popped out of hyperspace like a cork out of a bottle.

For a microsecond it hovered between being and not-being, as though deciding if it were worth the effort to exist in the real world. Its metal body flickered with the blue nimbus of a high frequency brush discharge and inside its magnaluminum skin insane instruments registered impossible readings.

The ubiquitous blue glow faded with the arcing snap of smoking relays. Almost instantly the commo bank crackled and spat like an angry cat.

"Get the hell out of here," a voice commanded.

"What the blazes was that?" Balmer demanded from the rear of the cabin. He pushed his tall, compactly sinewed body violently from the astrogator's couch and swore vigorously as the sudden movement threw him against the commo panel to his right. A toggle switch dug a small channel in the flesh above his right eye. He fished a handkerchief from his breast pocket and staunched the ooze of blood.

Thomas N. Scortia, author of THE SHORES OF NIGHT, which appeared in the 1956 Dikty Anthology, and many other stories, returns with this contribution to the legend about Kilroy that was old before that famous gentleman was born. Who was he? Haven't you heard about Kilroy?

"Damn, damn, damn," he said very carefully and with tight-lipped precision.

"You heard me," the speaker said again. "This here system's private property. Get the hell out."

"Nut!" Balmer opined loudly.

Fable grabbed a welded handhold beside the transmitter and flipped the transceiver switch to "send."

"This is Survey X-23-T. Come in and identify yourself."

He flipped the switch to "receive" and waited, blotting the cut above his eye. The audio bank above the transceiver resembled so many blank coin-sized eyes regarding him with an idiot stare. They crackled and spat and whistled. There was no other sound.

Balmer's squat, thick-necked figure floated down beside him.

"What do you think?" the pilot wanted to know.

"English. Sounds like a modern accent. Beyond that, your guess is as good as mine."

The audio bank muttered and mumbled and buzzed. Fable hit the send toggle and said, "All right, Mister. Come in and identify yourself."

The audio bank only burped.

Then there was a shrill whistling sound. It squelched abruptly and the same voice said peevishly,

"I told ya onct an' I told ya twiset. Now, git outta my system, dammit."

"Sounds like an old duck," Balmer said. "What's he doing out here?"

"Space hermit," Fable snorted. "Look, old-timer," he told the voice, "this is a League survey ship and, whether you like it or not, you're on our list."

The voice broke into a series of muffled curses. "Ain't no privacy for a man anywhere. Dog you from one system to another."

"Just doing a job. Give us three days and then we'll leave you alone."

"I know you johnnies. Give you a yard... Oh, damn, don't suppose I can stop you. Coming in to Two?"

"Two's the one," Fable admitted. "Every other planet in the system looks like a deep-freeze or a furnace."

"Okay. Atmosphere density's point seven six at sea level. Figure out your own skip pattern. And don't bother me any more."

"Wait! What's your name?" Fable clipped as the carrier wave began to fade.

"Pete Kilroy," the voice said, "and the hell with you."

"Kilroy," Balmer moaned. "Wouldn't you know it though."

"We're low on reaction mass for planetary drive," Fable pointed out as Balmer fed his skip data to the auto-

pilot. "May as well use the atmosphere to brake us since we have the data."

He began to strap himself into the astrogator's couch as Balmer completed his task. He moved the wafer-thin cathode tube in a wide arc on its mount until the surface faced him. Then he cut in the telescopic circuits.

"You won't see much," Balmer called back. "Heavy cloud masses."

Fable started to answer but the first burst of acceleration pushed him back into the couch and he felt his lungs collapse with the sudden weight. For seconds he felt the old nausea in the pit of his stomach as the fluids of his inner ear sent out insane signals each time the rockets fired briefly. Seconds later the auto-pilot began to build up speed in the new direction it had selected.

The ship accelerated at a constant two gees for nearly an hour. Finally Balmer cut the engines manually and began to make minor corrections from direct observation. Fable began to feel loggy and he was just beginning to doze when he heard a sharp exclamation from the pilot.

"What's the matter?" he demanded sleepily.

"Take a look at Two."

He reached out and cut the view screen in at normal magnification. The cloud-matted daylight side of Two filled the screen and for a

moment he could see nothing but the blue-white glare of the cloud level. Then he noticed the tiny specks scattered across the face of the white.

"Moons?" he suggested.

"Artificial satellites," Balmer said sourly. "Take a closer look."

Fable cut in the highest telescopic circuit and suddenly one of the specks swelled to a sphere of metal nearly thirty feet in diameter. It revolved slowly on its axis as he watched.

Luminous letters painted on the side of the satellite paraded across his vision.

They said, "Danger! Death Rays!"

He found another sphere in the same orbit and following the first by perhaps a hundred miles. There was a sign on this one too.

It said: "Trespassers Buried Free of Charge!"

A third sphere behind the second reported: "Quarantined! Bubonic Plague!"

"There's just one thing we need now," Balmer snorted.

"What?"

"One that says 'Beware of the Dog'!"

A moment later Fable found one.

The ship had passed the orbit of the satellites when the auto-pilot fired the engines in a quick braking blast. As the engines died, the gyroscope in the depths of the

ship sounded a rising whine and the nose of the vessel again rotated toward the world below. Fable watched the cotton-batting sphere that was Two swim down over his viewplate. As it began to dissolve into the lower edge of the screen, he cut in the forward pick-up and watched it drift back into view.

Under ordinary landing conditions, they would have approached tail downward, using the planetary drive rockets to brake their fall. It was possible to use the atmosphere of a planet to brake forward speed by skipping the ship over the fringes of the air envelope in much the same manner that a stone skips over the surface of a pond, but this was quite dangerous and difficult to do without data on air densities. With the bare data that Kilroy had given them, Fable had been able with the observed surface gravity of Two to calculate the extent of the atmosphere and to set up a skip pattern for the auto-pilot to follow. Not that Balmer was not skilled enough to handle the pattern manually, but the auto-pilot, within the limits of its operation, could adjust for the approach much more quickly and smoothly.

Fable was scanning the viewplate for a break in the cloud surface ahead when he noticed that the deck under him was trembling with a small but definite vibration.

For a moment its significance didn't penetrate. Then he yelled,

"Balmer. Check your hull pyrometers."

The pilot's hand lashed out frantically and Fable was slammed into the couch as the engines shuddered to life. It seemed for a moment as if the ship were plunging straight downward into Two.

"We shouldn't have hit atmosphere for another ten seconds," he yelled above the thin shriek of knifed air.

He could hear the heavy vibration of fuel pumps below the power deck. The bulkhead beside him began to vibrate as the stubby airfoils of the ship bit into the atmosphere. The temperature of the cabin was rising and he felt the droplets of perspiration beginning to bead his lip.

The ship yawed wildly for a moment and he seemed to lose all orientation. For seconds it seemed as if they were falling end over end. Then his sensations began to sort themselves into a coherent pattern. He realized that he had clamped his teeth tightly together. He felt the warm taste of blood from compressed gums.

For a second he lost all weight and the rockets took on a heavier note. Balmer was shouting something, but the only word Fable could make out was "Kilroy," repeated again and again.

He flipped the viewscreen

to the aft pick-up. They were falling straight down, tail first. They were in controlled flight though, he saw with relief.

"What happened?" he demanded, surprised at the steadiness of his voice.

"Point seven six, my eye," Balmer rasped. "Sea level density's more like one and a half."

No wonder they'd hit atmosphere so soon, Fable thought. A little more and the ship would have been thrown out of control to drive itself into the planet's surface far below.

"That old coot tried to kill us," Balmer said.

Fable's viewplate cleared at that moment as the ship plunged through the clouds. Below as far as his eye could see a huge planetary ocean gleamed placidly.

"Hope you brought your water wings," he said.

The ship still had a lateral component of velocity, he saw from his instruments. However, there was no feature on the surface below to which he could relate that component and it appeared as if they were falling vertically.

"I'm taking her up," Balmer said.

"Wait a minute."

"Another minute and you'll be taking a bath."

"There's an island," Fable exclaimed as a triangular land mass floated into view from

the left. He felt the rockets increase their thrust momentarily as Balmer slowed their fall. Moments later they were falling again, but this time in a path that would intersect the vertex of the triangular island. Fable saw that the major part of the island was covered with a thick growth of trees. He had a quick impression of massive buildings grouped at the end opposite from the vertex as the ship settled toward the white area that Balmer had selected. Probably a sandy beach, he thought.

"Kilroy," he heard Balmer shout.

He caught one glimpse of the beach rushing toward them. Scrawled across the smooth white expanse was a series of ragged black letters.

They spelled: "Danger! Quicksand!"

Fable kicked at the dirty black stains in the sand and then shook his boot free of clinging particles.

"Apparently, he spelled the words out in a series of bonfires," he said. "That way the charcoal marks would be visible for some distance and the rain wouldn't wash the stuff away for some time."

"Well, we can't leave him here. He's obviously a candidate for the laughing academy," Balmer grunted. He heaved his shoulders, throwing the weight of the anti-gravity pack higher on his

back, and began to buckle the remaining straps that dangled from the hollow magnesium frame. Then he checked the jet bottles and their fuel lines on either side of the assembly.

"Why not?" Fable wanted to know. "I don't relish the idea of a maniac with us on the return trip to base."

"You know better than that."

"I suppose so," Fable shrugged. He looked toward the line of trees that bordered the stretch of beach upon which they had made planet-fall.

"He must have spent the last five years making signs," he observed.

Along the border of the forest at irregular intervals were scattered large signs and small signs and he could see small placards nailed at random on the nearer trees. Several of them read: "Radioactive Area!", "Keep Off the Grass!", "Sound Your Klygon!" and one huge sign next to a break in the tree line shouted: "Don't Feed The Hypogrif!"

"Where'd he get all the materials?" Fable wondered.

"Probably from the city we saw on our way down. That undoubtedly is where he's holed up." Balmer began to buckle a needle beam to his hip.

"Well, I'll bring him back," he said.

"What am I supposed to do while you hunt this man?"

Balmer fumbled with the control box on his chest. The jet bottles sobbed and coughed as he began to drift upward.

"Just play nice," he said, "and Daddy'll bring you a lollipop."

Fable watched him rise into the sky and drift slowly to the west, his body swaying slightly from the thermal currents rising from the forest.

Fable busied himself for the next hour, running a routine mechanical check on the engines and recalibrating the navigation instruments. As soon as he had assured himself that no more could be done, he began to wonder what he might do next to escape the inevitable boredom of waiting. He began to wish that he had taken the second anti-grav frame and followed Balmer. He had to admit, however, the wisdom of one man's staying with the ship. After all, you never knew what a crazy coot such as Kilroy might do. He might even try to blow up the ship.

He wondered about the city they had seen. There'd been only a brief glimpse and neither of them had thought to trip the cameras, but he remembered low squat structures, unadorned and massive-looking even at that elevation. Certainly the beings who had built the structures weren't indigenous to the planet unless they were amphibians.

He left the ship and wandered across the beach toward the edge of the wood. He wanted to get a better look at some of the smaller signs that Kilroy had posted. The hermit had displayed a startling fecundity of imagination in conjuring up lethal dangers against which he warned the viewer.

As he approached the clearing next to the sign, forbidding anyone to feed the hypogryf, he saw that the space was quite regular. It appeared to have been cleared fairly recently and through this break in the trees a road stretched back into the forest. What he had at first assumed to be some kind of plastic paving material, he now saw to be fused dirt and sand. It was as though someone with a hot torch had melted a path through the forest down to the beach.

As he leaned over to inspect the surface more closely, he heard a violent crashing in the underbrush.

He looked up to see a nightmare of wings and talons and hooked beak plunging down on him at rocket speed.

For the briefest instant, an idiot thought giggled in his mind.

He could not well avoid feeding the hypogryf.

As soon as Balmer had ascended to nearly a hundred feet, he set a course for the

east end of the island where they had noticed the city. He watched Fable's figure dwindle to an undifferentiated blob of darkness against the white sand and then he looked down to find that he was over the forest. The growth beneath him was thick and matted with no one specific plant predominating. To his left he saw a sharp division in the forest and he flew laterally for a moment until he was directly over the area. The break was a straight path cut through the trees and he could see that the surface of the cleared lane shone with a glazed appearance. The road was quite straight and pointed like an arrow to the east toward the city.

Using the road as a guide, he continued east. He had estimated the distance to the base of the triangular island at nearly forty miles, but, after an hour of flying, he decided that it was probably closer to thirty. The sun was already hot on his back and his plastic visor was fogging with perspiration as he approached the city.

It looked quite crude. It was composed of massive cubical structures of slag-like material that showed a wavy, glazed effect on its surface. It was, he decided, probably the same fused earth that surfaced the highway. The group looked, somehow, hastily thrown together with little attention to order. He was so

engrossed in the details of the buildings that he didn't notice the shimmer in the air.

Suddenly it was as if he were wading through thick molasses that solidified in his path.

The breath was shoved violently back into his throat and the jet bottles coughed and sputtered. Then he began to fall at an impossible angle. It was as if he were sliding down the side of a slick glass dome.

Somehow he managed to regain control and steer laterally. A second later he was free and hovering some distance away from the shimmer. Kilroy, Balmer decided, must have cannibalized his ship to build a force screen that size. Either that or he had found some apparatus left by the original builders of the encampment. Whatever the explanation, the group of buildings was quite effectively encircled by an impenetrable umbrella that resisted all movement perpendicular to it.

He gained altitude for a moment so that he might inspect the shore beyond the group of buildings. He had thought that the screen might terminate in the water and that he might swim under it. Kilroy had been much too clever for that, he saw. No part of the force boundary touched the water.

Finally he drifted down to the highway. He debated

scouting the limits of the screen, hoping to find a gate. Screens of this type could be projected from a point either inside of or outside of the hemisphere and occasionally an electronic gate was used to permit local entry without collapsing the dome. Probably Kilroy had adapted his ship's meteor screen to produce the heavy field. In which case, he probably didn't have the necessary equipment for a gate, unless he'd purposely brought it along.

The anti-grav frame was beginning to weigh him down now that he had turned it off and he began to unbuckle the straps. He sat down and carefully worked the apparatus from his shoulders and onto the ground. He carried it off the highway and leaned it against the gnarled trunk of a wide-leaved tree. As he rose, he noticed for the first time that someone had carved a series of letters with a needle beam in the bowl of the tree.

"Kilroy was here," he read with a snort of disgust.

He checked the anaesthetic gun at his waist and the needle beam on the other side. Then he left the highway, walking parallel to the transparent shimmer of the screen. The vegetation on either side for perhaps twenty feet back had been flattened into a brown sere mat where the screen had apparently oscillated back and forth during a period of instability.

He had walked perhaps a hundred yards along the circumference when he saw the large sign which read: "Beware! Booby traps." Some distance away there was an even larger one which proclaimed: "Monsters! Proceed at your own risk!"

Balmer began to get angry. It was like fighting a shadow. They hadn't even seen Kilroy yet, but everywhere were the signs of his ubiquitous presence.

He paused before the "Proceed at your own risk!" sign and inspected it carefully. The white background of the sign was yellowed with age. Apparently Kilroy had painted this one at least a year before. The paint was already becoming veined with age, but there was no sign of scaling. He circled around it. There were more words on the back.

They said: "You were warned."

His feet must have encountered some tripping device at that moment, for in the next instant a heavy sapling which had been bent almost double suddenly freed itself and whipped erect. He felt a hand grab at his boots and then he was flying upward, feet first.

His head struck the ground and splinters of pain laced his skull. For seconds he was too dazed to realize what had happened. Then he discovered he was dangling, head down, from a thick rope that disap-

peared into the foliage of the tree above him.

"I have something to say," an unctuous voice said.

"Damn you, Kilroy," Balmer yelled, swinging wildly. "Come out here and cut me down."

"Keep your temper," the voice said piously.

For a moment Fable stood rooted to the highway in shocked disbelief. The beast thundered toward him in an unswerving path, its tiny yellow eyes gleaming hungrily. He saw the beaked mouth work suggestively as the thing emitted tiny, mewling cries. They were fully as horrible as if the beast were roaring with an ear-deadening volume.

Somehow he found the strength to turn. He was running then with a wild panic clutching his throat. His feet left the highway and began to sob through muffling sand. The stuff sprayed around his boots and splattered his knees. He knew with a horribly divorced part of his mind that he was going too slow, that he would never make it to the ship.

Then his right toe dug into the sand with shuddering violence and his forehead pounded into the damp sand. He lay, clutching moist gobs of white particles...waiting.

He waited for a long while.

He listened, but there was no noise.

He sat up and looked around.

The beast had disappeared.

Someone laughed a high, cackling laugh and he whirled in the direction of the wood. The ragged figure, clad in tattered plastine coveralls, eyed him from under scraggly, white brows and pursed its wrinkled lips.

"Well, now, if you ain't the picture."

"Kilroy."

"The same."

Fable clawed his way to his feet and brushed the white sand from his trousers. He wondered what had happened to the beast. Certainly Kilroy hadn't frightened it away... He started to advance on the old man.

Then he stopped. Except for the mewling cries, the beast's charge had been absolutely silent, he realized. Not a footfall and the thing must have weighed at least a ton. Come to think of it, in retrospect the legs had been moving entirely too slowly for the speed of its charge.

"Now, ain't you sorry you didn't stay away?" Kilroy said.

"You and your damn so-lideo projections," Fable snapped. He walked up to the old man and raised his fist. "If you weren't so dried up, I'd..."

"He, he, go ahead and try it."

The sudden suspicion

stopped him. He made a tentative pass and instantly Kilroy was gone as though someone had thrown a switch.

"This place ain't healthy," Kilroy said from behind him.

He whirled.

"Better git while the git-tin's good," a duet of Kilroys remarked from his left.

"Sure hate to see a lad like you come to a sticky end," a quartet giggled behind him.

"Like that," a distant chorus chanted as two mounds suddenly bulged in the sand at his feet. Each mound was marked with a crude wooden cross.

"Sure would," another voice said as all but one of the Kilroys flickered out. The remaining Kilroy flapped his arms violently and soared upward to perch awkwardly on a sign nailed high in the fork of a tree.

The sign said, "Danger! Active Volcanoes!"

The voice dripped self-satisfaction.

"I have something to say," it said.

"Keep your temper," it said.

Balmer's reaction almost blistered the air.

"Keep your temper," the oily voice admonished. There was the faintest suggestion of a wagging finger in the tone.

Balmer examined his position. The concealed noose had slipped easily over his boots as the bent sapling had snapped erect. It was, he real-

ized, a trap as old as man himself. The ancient North American Indians had used a similar device to trap small game. The thought that he was very large game indeed did nothing to maintain his forced calm.

He found that by straining he could move his head and get an uneasy view of the thick rope that supported his body. It was at least an inch in diameter and carefully woven with vines for camouflage. He noticed with a start that the light was beginning to fade and he had a mental picture of himself, hanging like a bled carcass in a butcher shop throughout the dark night.

Then he remembered the needle beam and he mouthed silent prayers that the sudden somersault had not dislodged it from its holster. He fumbled blindly for a moment and then his hand encountered the butt. As he started to withdraw it from his holster, his hands slipped and for an agonizing moment, the weapon seemed to slip from his fingers. He clapped his hand wildly to his side and his body began to sway violently. He felt the needle beam trapped between his arm and chest.

Carefully he crossed his left hand over his body. A breathless moment later the weapon was in his hand.

Taking aim was the most difficult part of the maneuver.

The beam could be triggered for several minutes before the charge was exhausted. There was, therefore, no real problem in intersecting the plane of the rope. However, each movement caused the sapling to bend sickingly and his body to sway and rotate lazily. There was a definite chance, he saw with some alarm, that he might bring the beam in too low. Of course, his thoughts added wryly, the beam cauterized as it burned and they did have some wonderful prosthetic devices these days. Still, he rather preferred his own two limbs rather than two reasonable facsimiles of plastic and metal.

Carefully he held his hand away from his body and waited until his body had ceased rotating. The light was getting dim and it was becoming increasingly difficult to see. Finally, he took a deep breath and thumbed the firing stud, moving his arm slowly in a fanning motion.

All at once the ground slammed him in the face. He rolled over and began to free his legs from the entangling rope. His fingers briefly encountered the heel of his left boot. A thrill of reaction twisted his stomach as his hand explored the charred, gummy gash where part of the material had been melted away.

A voice to his left said, "Keep your temper!"

One hand closed on the needle beam and he leaped to his feet. He pushed the under-growth aside. In the twilight he almost overlooked the dull enameled box, half buried in the dirt and mould of the forest floor.

"I have something to say," the box said.

The flare of the beam silenced its endless chant.

He found the anti-grav frame beside the tree where he had left it. As he strapped the clumsy device to his back, he decided that there was no point in trying to find a way through the screen in the darkness. For all he knew, Kilroy might have prepared other and more deadly traps.

He made his way to the highway and stood for a moment, looking at the buildings of the encampment. He wished that he'd thought to bring a pair of binoculars. In the fast growing shadows the buildings looked even more massive than before. He could see several shadowy openings in one of the nearer structures and he wondered what race must have originally reared the buildings with such a complete disregard for anything, but raw strength. The doorway, if such it was, appeared over thirty feet high.

The general simplicity of design disturbed him. It didn't at all jibe with the advanced techniques indicated by the use of the fused earth

method of construction.

At first he didn't notice the heavier shadows moving among the buildings to his left. When the motion finally did catch his eye, he turned and saw something huge and ponderous approaching his position. The moving shape paused at his movement. He stood, waiting for some sound or movement.

Suddenly a low moan quivered on the night air as though the thing were in pain. The moan cut off in a shrill piercing cry. In the next instant the massive creature was hurtling forward in a stumbling lunge. At the last moment it encountered the force screen and lurched backward. He had only the vaguest impression of a huge body, glittering with scales and topped by a beaked face with golden hawk eyes. Then other shadows were running from the buildings toward him.

A score of creatures hurled themselves with wild abandon against the impalpable screen. One by one they were hurled backward, only to renew their assault.

Quite without thinking, Balmer activated the anti-grav frame. His body shot upward into the darkness of the night, leaving the creatures below.

The fury of their shrill cries followed him into the blackness of the upper air.

A fifty foot tyrannosaurus spent the evening clawing at the airlock while Fable and Balmer argued in the control room.

"I don't see how they can be an indigenous race," Fable insisted.

"Why not?" Balmer frowned at the image in the aft screen. The shadowy monster outside was busily gnawing at one leg of the ship's tripod. It sounded like someone cracking walnuts with his teeth.

"Too big for one thing," Fable said.

"They didn't seem to have any trouble moving around."

"Probably personal anti-gravity screens. After all, we use them on heavy planets."

"You're assuming a lot."

"Look," Fable protested, "we've found only one land mass on this planet and a small land mass at that. There's no evidence of any native culture, let alone one advanced enough to build a road like that one outside."

"Well, what's the answer?"

"You said the encampment looked crude."

"That's right. Forgetting the size, just a bunch of glorified huts made of fused earth."

"Well, maybe they're shipwrecked."

"How so?"

"Well, aren't those the sort of structures we'd put up if we were forced down on a planet?"

"Not if we planned to stay permanently."

"That's the whole point. The encampment has all the air of being temporary. Maybe they're just waiting rescue."

"And Kilroy's got them bottled up behind a force screen."

"That's what worries me. This is the first contact we've had with an advanced race."

"And they're hopping mad over the antics of a screwy space hermit."

"Exactly. Apparently Kilroy decided he didn't want to be bothered. Since he couldn't remove them, he just walled them up in one corner of the island."

"No wonder they're spitting blood," Balmer said.

"We've got to contact them somehow and break the screen."

"That shouldn't be too difficult...breaking the screen, I mean. We can find the projector with a warp detector."

"But," Fable said wearily, "how do we explain their being sealed off in the first place? They don't sound as if they're in a mood to listen to alibis."

"There's one other thing," Balmer said. "If they're shipwrecked, where's the wreck?"

"The what?"

"The wreck. Where's the wreck of their ship?"

At that moment a muffled explosion sounded. The ship shuddered alarmingly. Balmer

whirled on the viewplate.

"He's trying to dynamite the tripod," he yelled as a second explosion thudded outside.

They dived for the hatch simultaneously, and tumbled down the three decks to the airlock. As the airlock opened ponderously, Fable remembered the tyrannosaurus.

"Wait," he yelled. "He may have something planted out there."

But Balmer was through the airlock and swinging agilely down the metal ladder to the sand. There was no sign of the monster.

"There he goes," Balmer shouted. He started off across the sand in a low gallop. Ahead of him, Fable saw the low figure of a man, running for the edge of the forest.

"Don't follow him," he shouted.

Kilroy's figure had barely reached the edge of the woods when a wall of flame leaped with a loud whoosh from the sand. Against the yellow backdrop, Balmer poised for an instant and then retreated hastily.

Fable met him several yards from the ship.

"Why'd you stop?" he demanded. "It's only another projection."

Balmer ruefully rubbed his forehead.

"Since when does a projection singe your eyebrows?" he demanded.

The next morning they checked for damage that Kilroy might have done during the night.

"Apparently he was just trying to scare us off," Balmer said. His face was hard and grim in the morning light as he finished adjusting the anti-grav frame to his back.

"That figures," Fable said. He was inspecting the two craters in the sand some distance from the ship. "The last thing he wants to do is marmoon us."

"What bothers me," Balmer said, "is that he might stop just trying to scare us." He rubbed his singed eyebrows thoughtfully.

Fable looked in the direction of the shallow, heavily carboned trench along the edge of the woods. They had discovered several empty drums near its edge. Kilroy had used their volatile contents to lay his flame barrier. The igniter had, Fable suspected, been a simple electric match. Crude, but workable.

Balmer checked the bulky warp detector strapped to his equipment harness and said, "He's probably projecting the screen from outside the encampment. I should be able to spot it by its warp field."

"You're not going to try to lower it immediately?"

"Not on your life. Those babies didn't want to play footsie yesterday and I doubt if their temper has improved since."

Fable watched him soar into the morning sky. Then he returned to the ship. He spent the morning bringing the log up to date. Periodically he scanned the fringe of the woods.

At 1150 hours Kilroy appeared near the highway and hailed the ship. Fable inspected the man in the viewscreen for several minutes. Finally he decided that he'd better see what the hermit wanted. He couldn't decide if this were the real Kilroy or merely another projection.

The man was carrying a white flag, he saw, a flag that looked suspiciously like the tattered remains of a pair of long underwear.

"All right," he told Kilroy as soon as he was within comfortable talking distance, "spit it out."

"You johnnies better git," Kilroy said.

"You're repeating yourself," Fable sneered. He saw that Kilroy's feet were firmly planted on the ground. The sand of the beach made definite ripples around the edges of his boots.

"Tired of playing with projections?" he asked.

"Them gooks on the north end ain't projections."

"Meaning what?"

"Meaning you'd better not fool with them. They're sure poison."

"Poison to you, maybe. Can't say I blame them."

A needle beam suddenly appeared in Kilroy's hand. He waved it awkwardly.

"Damn it, I told you jokers to git."

The weapon, Fable saw, looked corroded, and ill-kept.

"You'd better put a charge in that if you're going to shoot anybody," he said.

Kilroy frowned. Then he swore and threw the weapon.

Fable ducked, stepped forward, and hit him. The blow didn't land solidly and in the next instant the mass of sinew and bone that was Kilroy was climbing over him.

He aimed a blow at the old man's stomach. Kilroy wiggled aside and the blow spent its force on empty air. He was suddenly on Fable's back, clawing at him like some ungainly spider. Fable dropped quickly to his knees and hunched forward. Kilroy gave a thin cry and flew over his head.

He landed on the sand and was on his feet immediately.

Before he could orient himself, Fable threw himself in a low, leg-breaking tackle. Kilroy collapsed in a heap. Fable moved to pin him to the sand as Kilroy began to struggle violently.

"Dammit," he panted. "Pick on an old man. Lemme up."

Then they heard the explosion.

Kilroy stopped struggling.

"Young idjit," he screamed. His voice was high and womanish.

Fable grabbed for his collar. "What was it?" he demanded. He shook Kilroy violently. "All right, talk."

"Young idjit," Kilroy screamed again.

"What was that blast?"

"Get out. We got to get away."

"Talk." Kilroy's teeth chattered loudly as his head snapped back and forth.

"We got to get out of here. The young fool set off the screen."

"The screen?"

"Had it booby trapped," Kilroy gasped. "Blows up if anybody tries to turn it off."

Bright beams of red light began to fan the air above the forest to the north. Then there was another explosion.

"Cut it out," Kilroy chattered. "Them monsters is loose and they'll be heading this way any minute."

"We're waiting for Balmer."

"No," Kilroy yelled. "They got him and we'll be next."

All the while new explosions punctuated the fantastic deluge of words from the man. Kilroy seemed to collapse in on himself.

Fable pulled him to his feet. Then he hit him hard on the chin and stepped back as Kilroy collapsed with a sigh.

There was a sound of violent crashing in the distance. A cloud of dust and smoke began to rise over the forest and through the cloud a small

form darted. Balmer was traveling as fast as the jet bottles would propel him.

He drew near and swooped toward the beach at top speed. He hit running and tumbled head over heels. Fable was beside him in seconds, helping him to his feet.

"Let's upship...fast," Balmer panted.

"What's happened?" Fable demanded.

"That's what happened." He gestured to his rear.

Less than a mile away, knee deep in trees that splintered before their advance, an endless stream of massive forms crashed toward them.

Fable turned to run after Balmer. Then he stopped to hoist the limp form of Kilroy to his back.

Behind him the things were bellowing their rage in voices that splintered the air.

They were well past the orbit of the last satellite when Fable returned from the hold.

"He'll sleep like a baby 'til we hit base," he said.

"Should have left him down there," Balmer growled.

"You don't mean that."

"Crazy as a loon," Balmer said. He gestured at the viewplate. It framed the last metal satellite, the one that said, "Beware! Death Rays!"

"Wonder how he built those things and got them into an orbit."

"He didn't," Fable said. "They're empty fuel tanks."

"That size?"

"Well, they're not from a human ship," Fable said.

"All right, stop being coy."

"I'm not. Kilroy told me the story on the beach. Those are empty tanks orbited by the alien ship, the one that brought our friendly gargantuas below."

"But we didn't see any sign of a ship."

"Well, that's the joker. That's why the girls were mad."

"Girls?"

"Sure. Our monsters were all female."

"Look, I've been nearly blown up and nearly stepped on like an ant. I'm not in the mood for riddles."

"Well," Fable said, "you've got to remember that people like Kilroy have a pathological desire for privacy."

"In other words, he's nuts. I'll take your word for that."

"Essentially. Anyway, when this alien star ship landed with the aliens, he didn't like being disturbed. After all, from what he'd said, he had enough trouble finding a habitable deserted world."

"But..."

"I'm giving it to you the way Kilroy gave it to me. He said they had some sort of language machine that taught him their language. Their sun's about to blow up and they're one of several survival groups. When they discovered we existed, they decided

to ask us for help in evacuating their world. Kilroy figured his little hermitage would be invaded by every kind of emergency team if they made contact. So..."

"So he locked them away."

"Wrong. He gave them directions to the nearest League base."

"But you said..."

"I know. What he didn't count on was that the males decided to go on, leaving the females behind. I guess they didn't have too much fuel and those beauties weigh a lot. Anyway, Kilroy tried the next best solution. He trapped them on the north end of the island with his screen. That leaves us with the pretty job of catching up with the males, getting help for them and finally pacifying their women."

"Hell hath no fury..." Balmer said. Then, "Wait a minute, how long have they been on the island."

"At least six months."

"You don't mean they crossed interstellar distances, using only a planetary drive."

"No," Fable said. "They have a stellar drive."

"Then they should have reached base before this."

"That's exactly it," Fable sighed. "That's why the women were so mad once they realized what happened."

When Balmer looked puzzled, Fable said, "Don't you get it? Kilroy sent them the wrong way."

—continued from Back Cover



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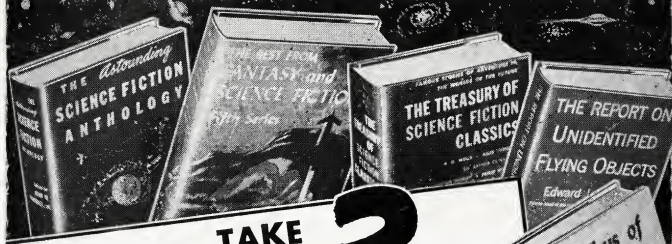
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